THOMSON MULTI MEDIA

SERVICE MANUAL
DOCUMENTATION TECHNIQUE
TECHNISCHE DOKUMENTATION
DOCUMENTAZIONE TECNICA
DOCUMENTACION TECNICA

X2000

WARNING : Before servicing this chassis please read the safety recommendations.
ATTENTION : Avant toute intervention sur ce châssis, lire les recommandations de sécurité.
ACHTUNG : Vor jedem Eingriff auf iesem Chassis, die Sicherheitsvorschriffen lesen.
ATTENZIONE : Prima di intervenire sullo chassis, leggere le norme di sicurezza.
IMPORTANTE : Antes de cualquier intervención, leer las recomendaciones de seguridad.

Do not disconnect modules when they are energized!
Repairs on power supply section are to be carried out only with isolating transformer.

Ne pas retirer les modules lorsqu'ils sont sous tension. N'effectuer les travaux de maintenance sur la partie reliée au secteur(Switch Mode)qu'au travers d'un transformateur d'isolement.

Module nicht bei eingeschaltetem Gerät entfernen!
Servicearbeiten am Netzteil nur nuter verwendung eines Regeltrenntrafos durchfuhren.

Non scollegare le piastre quando sono alimentate!
Per le riparazioni sulla sezione alimentatore, utilizzare un trasformatore isolatore.

No desconectar los módulos cuando están activados. Las reparaciones en la sección de alimentación de energia deben ser ejecutadas solamente con un transformador de separación.

⚠ Indicates critical safety components, and only approved by the manufacture components should be used for repiacement. Only then can the operational safety be garanteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠)par des composants non homologués selon la
Norme CEI 65entraine la non-conformité de l'appareil. Dans ce cas, la responsabilité du fabricant n'est plus engagée.

Wenn Sicherheitsteile(mit dem Symbol ⚠ gekennzeichnet) nicht durch Original - Ersatzteile ersetzt werden, erlischt die Haftung des Herstellers.

La sostituzione del componenti di sicurezza(evidenziati con il segno ⚠)con compinenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio. In tal caso è "esclusa la responsabilità " del costruttore.

La sustitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato. En ese caso, el fabricante cesa de ser responsable.

MESUREMENT CONDITIONS - CONDITIONS DE MESURES - MESSBEDINGUNGEN CONDIZIONI DI MISURA - CONDICIONES DE MEDIDAS

RECEIVER
On UHF, input level:1mV, bartest pattern:
-PAL, I standard, 100% white.

Via the scart socket, input level:1Vpp, bar test pattern:

Colour, contrast and brightness at mid-position, sound at minimum.
Programme selected: PR01.

DC voltages measured between the point and earth using a digital voltmeter.

RECEPPTEUR:
En UHF, niveau d'entrée 1mV mire de barres
-SECAM, Norme L, blanc 100%

Par la prise Péritélévision, niveau d'entrée 1Vcc, mire de barres.

Couleur, contraste, lumiere à mi-course, son minimum.
Programme affecté PR01.

Tensions continues relevées par rapport à la masse avec un voltmètre numérique.

EMPFÄNGER:
Bei UHF Eingangspegel 1mV, Farbbalken:
-PAL, Norm G, D/K, Weiss 100%

Über die Scarbuchse : Eingangspegel 1Vss, Farbbalken:

Farbe, Kontrast, Helligkeit in der Mitte des Bereichs, Ton auf Minimum.
Zugeordnetes Programm PR01.
Gleichspannungen mit einem digitalen Voltmeter zur Masse gemessen.

RICEVITORE:
In UHF, livello d'entrata 1mV, monoscopio con barre:
-PAL, nomaG, bianco 100%

Via SCART, livello d'entrata 1Vpp, monoscopio con barre:

Colore, Contrasto, Luminositá a meta corsa, Suono minimo.
Programma designato PR01.

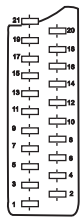
Tensioni continue rilevate rispetto alla massa con un voltametro digitale

RECEPTOR:
En UHF, nivel de entrada 1mV, mira de barras:
-PAL, norma G, blanco 100%.

Por la toma Peritelevision, nivel de entrada 1Vpp mira de barras.

Color, Contraste, luz a mitad de carrera, Sonido minimo.
Programa afectado PR01.

Tensiones continuas marcadas en relacion a la masa con un voltimetro digital.



		ENGLISH	FRANÇAIS	DEUTSCH	ITALIAN	ESPAÑOL
1	⊖	AUDIO"R"	AUDIO"D"	AUDIO"R"	AUDIO"D"	AUDIO"D"
2	⊕	AUDIO"R"	AUDIO"D"	AUDIO"R"	AUDIO"D"	AUDIO"D"
3	⊖	AUDIO"L"	AUDIO"G"	AUDIO"L"	AUDIO"S"	AUDIO"I"
4	⊥	AUDIO	AUDIO	AUDIO	AUDIO	AUDIO
5	⊥	"BLUE"	"BLEU"	"BLAU"	"BLU"	"AZUL"
6	⊕	AUDIO"L" MONO	AUDIO"G" MONO	AUDIO"L" MONO	AUDIO"S" MONO	AUDIO"I" MONO
7	⊕	"BLUE"	"BLEU"	"BLAU"	BLU	AZUL
8	⊕	SLOW SWITCH	COMMUT LENTE	AV UMSCHALTUNG	"COMMUTAZIONE LENTA"	COMMUTAZIONE LENTA"
9	⊥	"GREEN"	"VERT"	"GRUN"	"VERDE"	"VERDE"
10	NC					
11	⊕	"GREEN"	"VERT"	"GRUN"	"VERDE"	"VERDE"
12	NC					
13	⊥	"RED"	"ROUGE"	"ROT"	"ROSSO"	"ROJA"
14	NC					
15	⊕	"RED"	"ROUGE"	"ROT"	"ROSSO"	"ROJA"
16	⊕	FAST SWITCH	COMMUT. RAPIDE	AUSTASTUNG	"COMMUTAZIONE LENTA"	COMMUTAZIONE LENTA"
17	⊥	VIDEO	VIDEO	VIDEO	VIDEO	VIDEO
18	⊥	FAST SWITCH	COMMUT. RAPIDE	AUSTASTUNG	"COMMUTAZIONE LENTA"	"COMMUTAZIONE LENTA"
19	⊖	VIDEO	VIDEO	VIDEO	VIDEO	VIDEO
20	⊕	VIDEO OR "SYNC"	VIDEO SYNCHRO	VIDEO ODER SYNCHRO	VIDEO O SINCRO	VIDEO O SINCRO
21	⊖	PLUG SCREENBOX	BLINDAGE PRISE	ABSCHIRMUNG DES STECKERS	INVOLUCRO METAL-LICO DELLAPRESA	BLINDAJEDEL ENCHUFE

⊕ :INPUT - ENRTÈE-EINGANG-ENTRATA-ENTRADA • ⊖ :OUTPUT-SORTIE-AUSGANG-USCITA-SALIDA • ⊥ :EARTH-MASSE-MASSE-MASSA-MASA

TECHNICAL DATA AND COMPOSITION OF VIDEO RECORDERS
CARACTERISTIQUES TECHNIQUES ET COMPOSION DES MAGNETOSCOPES
TECHNISCHE DATEN UND ZUSAMMENSETZUNG DER VIDEORECORDERS
CARATTERISTICHE TECNICHE DEI VIDEOREGISTRATORI
CARACTÉRISTICAS TECNICAS Y COMPOSICIÓN DE LOS VÍDEOS

POWER REQUIREMENT : **Alimentation :** **Netzell:** **Alimentazione:** **Alimentacion:**	**200-240V±10%** **50/60Hz**	**4Heads Helical Scan system:** **4têtes vidéo** **4Video-Kopfe** **4Testing Video** **4Cabezas video:**	**Consumption** **Consommation:** **Leistungsaufnahme** **Consumo:** **Consumo:**	**17W** **4.5W(ECO)**
Programming: **Programmation:** **Timer:** **Programmmazione:** **Programacion:**	**SHOWVIEW**	**2Heads Helical Scan system:** **2têtes video:** **2Video-köpfe:** **2Testine video** **2Cabezas video:**	**Sound:** **Son:** **Ton:** **Suono:** **Sonido:**	**Stereo**
Tape speed: **Vitesse de défilement:** **Bandgeschwindigkeit:** **Velocitá del nastro:** **Velocidad de la cinta:**	**SP** **SP/LP** **SP/LP/SLP**	**Tape format: VHS** **Format video** **Video-system** **Formato video:** **Formato video:**	**Power save:** **Sécurité secteur:** **Gangreserve:** **Riserva alimentazione:** **Seguridad red:**	**1min**
SP = 23.39mm/sec		**LP = 11.70 mm/sec**	**SLP : 33.35mm/sec.(only NTSC PB)**	

GB For service information on the deck mechanism see separate publication "X2000 SERIES MECHANICAL ADJUSTMENTS"

F Pour toute intervention ou réglage sur la partie mécanique, se reporeter au FASCICULE MECANIQUE X2000 .

D Informationen über mechanische Einstellungen entnehmen Sie bitte dem Handbuch "MECHANISCHE EINSTELLUNGEN X2000".

I Ulteriori informazioni sulla meccanica si possono trovare nelle seguenti pubblicazioni: "SERIE X2000 REGOLAZIONI MECCANICHE".

E Para información de servicio técnico sobre el mecanismo de la platina, consulte la documentación separada "AJUSTES MECANICOS SERIES X2000".

SCHEMATIC DIAGRAMS & PCBs

Reference	Interconnect Wiring Diagram	Power Circuit Diagram	Syscon Circuit Diagram	A/V &Secam Color Circuit Diagram	Hi-Fi & SW Circuit Diagram	PIF Circuit Diagram	MAIN PCB
THOMSON							
VTH6380G	9-10	11-12	17-18	23-24	31-32	35-36	39-42
VTH6380F	9-10	11-12	17-18	23-24	31-32	35-36	39-42

INFORMATION - INFORMATIONS - HINWEISE -
INFORMAZIONI - INFORMACIONES

GB The table below shows how the Commercial Reference corresponds to X2000 series Chassis Reference number, it also gives additionnal information that can be used to identfy the major components according to chassis type.

F Le tableau ci-dessous donne la correspondance entre les références commerciales et les types de chassis de la série X2000, de plus if apporte un complement d'informations permettant d'identifier les composants montes suivant les chassis

D Die untenstehende Tabelle zeigt die Zuordnung der Gerätebezeichnungen und der Chassisvarianten der Reihe X2000 an.

I La tabella sottostante indica la corrispondenza tra i fiferimenti commerciall e i tipi di telaio della serie X2000. Inoltre consente di identificare i principali componenti in base al tipo di telaio.

E El cuadro sigulente presenta la correspondencia ente las referencias comerciales y los tipos de chasis de la serie X2000, además ofrece una informacion complementaria que permite identificar los componentes montados según el tipo chasis.

Com. Ref.	Chassis	Mechadeck	Tuner	ECO
VTH6380G	X2000	DRPB200A	SSTMI-GKIQ1 LGTMI-GKIQ2 LGTMI-GKI(MONO) ALTMI-GKIQ1 ALTMI-GKL1(MONO)	YES
VTH6380F	X2000	DRPB200A	SSTBI-SLKQ1 SSTBI-SLQ2 LGTBI-SLQ1	YES

GB

1.MAINTENANCE INSTRUCTIONS

For service information on the deck mechanism see separate publication <X2000 SERIES MECHANICAL ADJUSTMENTS>.

1.1 Resetting the video recorder

a) Disconnect the video recorder from the mains supply.
b) Hold down the <+> and <-> keys on the front panel and reconnect the video recorder to the mains supply. Release the <+> and <-> keys.
c) Resetting the video recorder also can be done in the service mode.

1.2 Service mode adjustments

Accessing the service mode

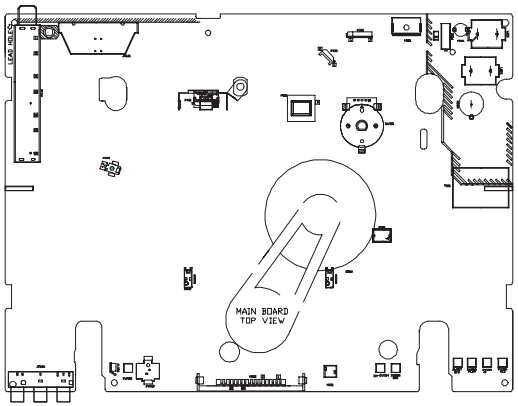
a) Press <menu> key on the remote control, then the summary menu is displayed on screen.
b) Sequential pressing the numbers as <3> ,<6>, and <9> will display the 5 items of service mode.
c) Each service mode can be accessed by pressing the digit key corresponding to the number on the left side. <0> key on the remote control will release the service mode.

1.3 Head switching point

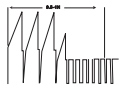
a) Insert a protected test cassette into the video recorder. The VCR will automatically enter the play mode.
b) Next enter the service mode as described above.
c) Press <5> key on the remote control, then the video control data is displayed.
d) Press <Rec> key either on remote control or on the front panel.
<0> key on the remote control will release the video control data mode.

2. Electrical adjustments - Réglages étectriques - Elektrische Einstellungen- Regolazioni elettriche - Ajustes eléctricos

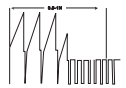
2.1 Test points and adjustment overview- Emplacement des points test el des réglages - Testpunkte und Abgieich- Übersicht - Punti test e panoramica generale delle regolazioni - Punto de prueba y emplazamientos de los ajustes.



2.2 Measurements Servo Section(Main Board) - Vérifications sur les circuits d'asservissements- Messungen Servoteil - Controlli parte Servo - Verificationes para parte Servo.

N•	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.2.1	**Oscillator frequency**		**Frequency conuter**	**IC501 pin38**	**None**	Confirm f =17.73447MHz±443Hz
2.2.2	Drum FF(Flip Flop)	PB/REC	Oscilloscope	IC501 pin 18	None	Check for 40ms±10μs
2.2.3	Capstan FG frequency	PB/REC(SP)	Frequency counter	IC501 pin 87	None	Check for f = 757Hz ±10Hz
2.2.4	Head switching	PB	Dual trace Oscilloscope Trigger ext. P502/5 (Drum FF)	Scart JK601 pin19	by software setup	1.Insert a protected test cassette into the video recorder. 2.The VCR will automatically enter the play mode. 3.Next enter the service mode. 4.Press <5>key on the remote control. 5.The video control data is displayed. 6.Press<Rec>key either on remote control or on the front panel. 7.<0> key on the remote control will release the video control data mode. 

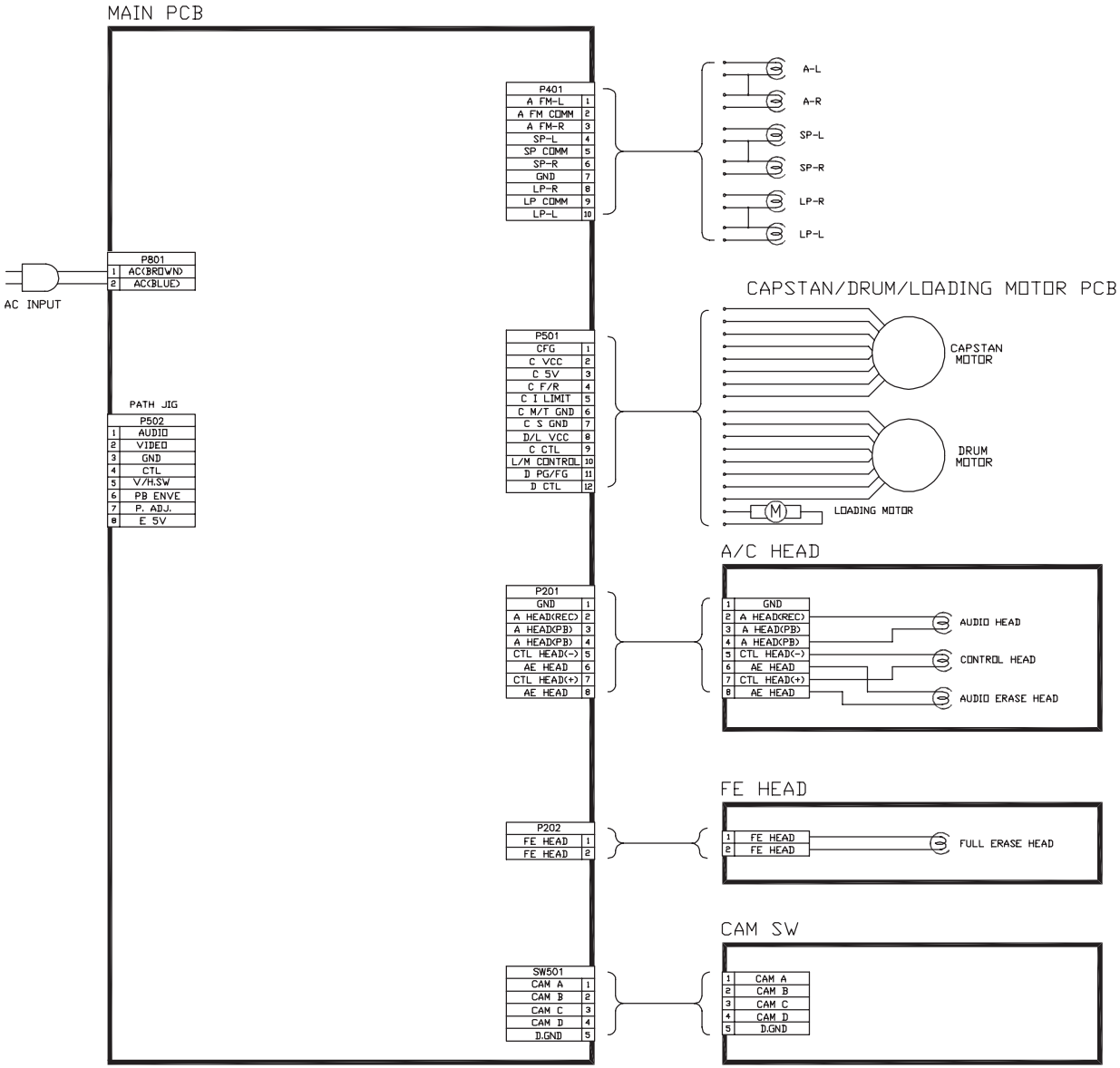
2.3 Video signal processing - Traltement video - video Signalteil - Elaborazione segnale video- Tratamiento video

N•	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.3.1	**CVBS EE level**	Select AV1 REC PAL PAL grey scale 1Vpp AV1 pin20	**Oscilloscope**	**AV1 pin19**	**None**	Check for VBS= 1Vpp±0.1Vpp BURST = 300mVpp±70mVpp 
2.3.2	CVBS EE level	REC SECAM Colour bar 1Vpp AV 1 pin20	Oscilloscope	AV1 pin19	None	MAGENTA BAR=210MvPP±20Vpp

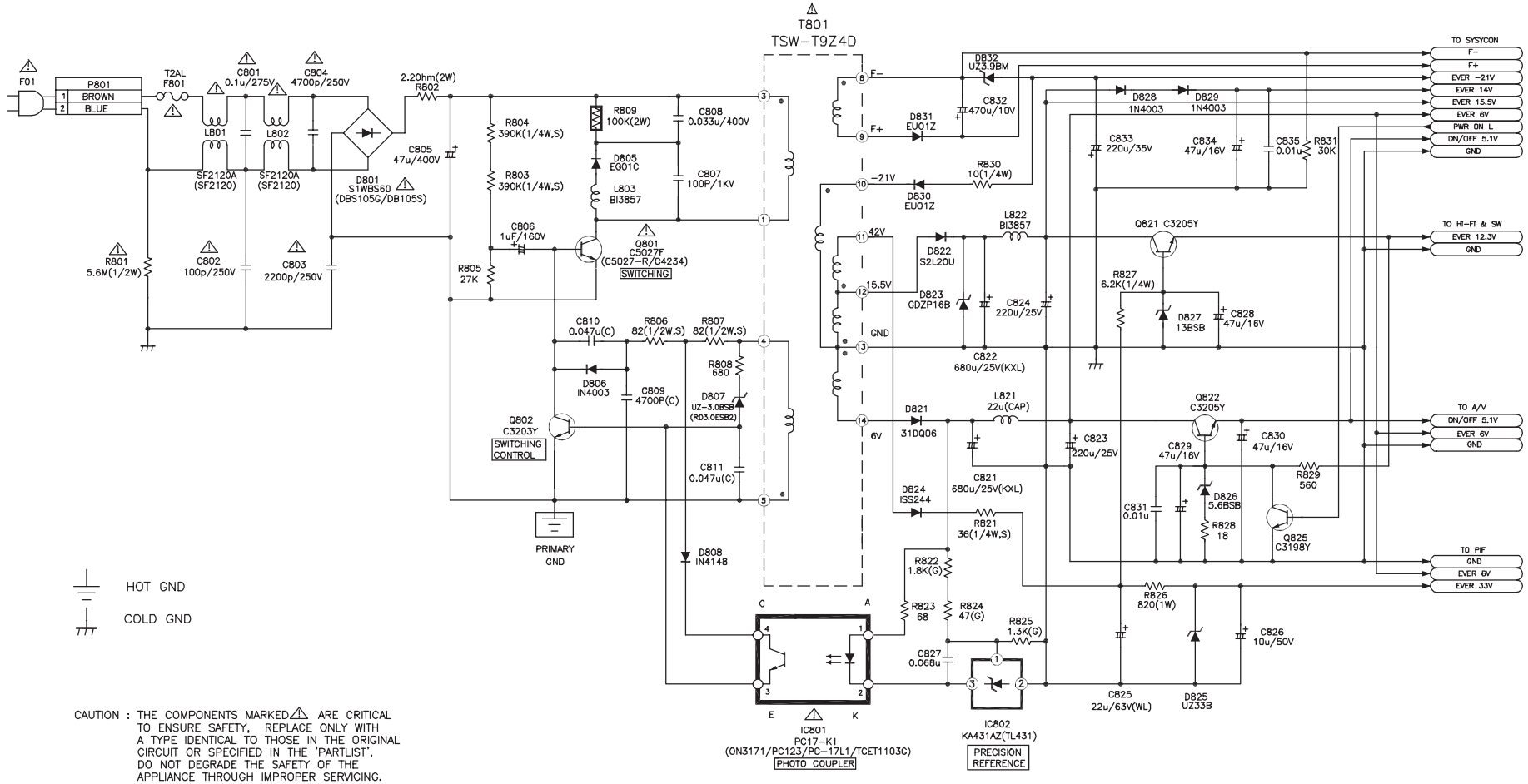
2.4 Audio signal processing - traltement audio - Audio Signalverarbeitung - Elaborazione segnale audio- Procesamiento audio

N•	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.4.1	**Bias oscillor trequency &level**	REC (Without signal)	**Oscilloscope**	**P202 pin1**	**None**	Check for 70KHz±5KHz 50Vpp±5Vpp

INTERCONNECT WIRING DIAGRAM



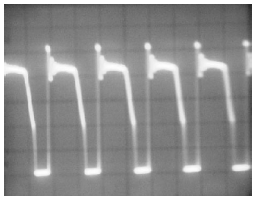
POWER CIRCUIT DIAGRAM



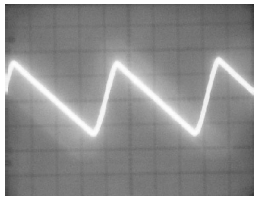
CAUTION : THE COMPONENTS MARKED⚠ ARE CRITICAL TO ENSURE SAFETY, REPLACE ONLY WITH A TYPE IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT OR SPECIFIED IN THE 'PARTLIST', DO NOT DEGRADE THE SAFETY OF THE APPLIANCE THROUGH IMPROPER SERVICING.

POWER		MODE		
LOC.	PIN	EE	PLAY	REC.
IC802	1	2.46	2.46	2.46
	2	4.81	4.83	4.82
	3	0	0	0.01
IC801 /803	1	5.88	5.89	5.89
	2	4.81	4.83	4.83
	3	0.25	0.25	0.25
	4	3.1	3.1	3.1

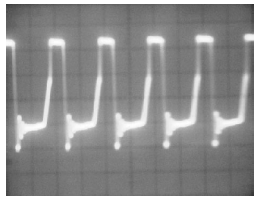
POWER		MODE		
LOC.	PIN	EE	PLAY	REC.
Q801	E	0	0	0
	B	-0.12	-0.11	-0.72
	C	323	323	323
Q802	E	0	0	0
	B	0.25	0.26	0.17
	C	0.12	0.11	0.17
Q821	E	12.58	12.6	12.6
	B	13.2	13.2	13.2
	C	15.6	15.36	15.4
Q822	E	5.2	5.19	5.2
	B	5.89	5.89	5.89
	C	5.97	5.97	5.96
Q825	E	0	0	0
	B	0	0	0
	C	5.89	5.89	5.89
Q826	E	0	0	0
	B	0.73	0.73	0.73
	C	0	0	0



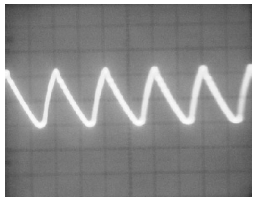
①T801 PIN 1 X : 0.1 kV DIV
Y : 5uS DIV



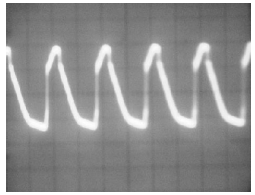
②T801 PIN 3 X : 2V DIV
Y : 2mS DIV



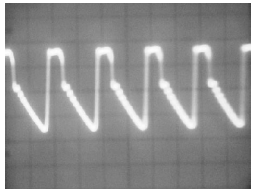
③T801 PIN 4 X : 5V DIV
Y : 5uS DIV



④IC801 PIN 3 X : 0.5V DIV
Y : 5uS DIV

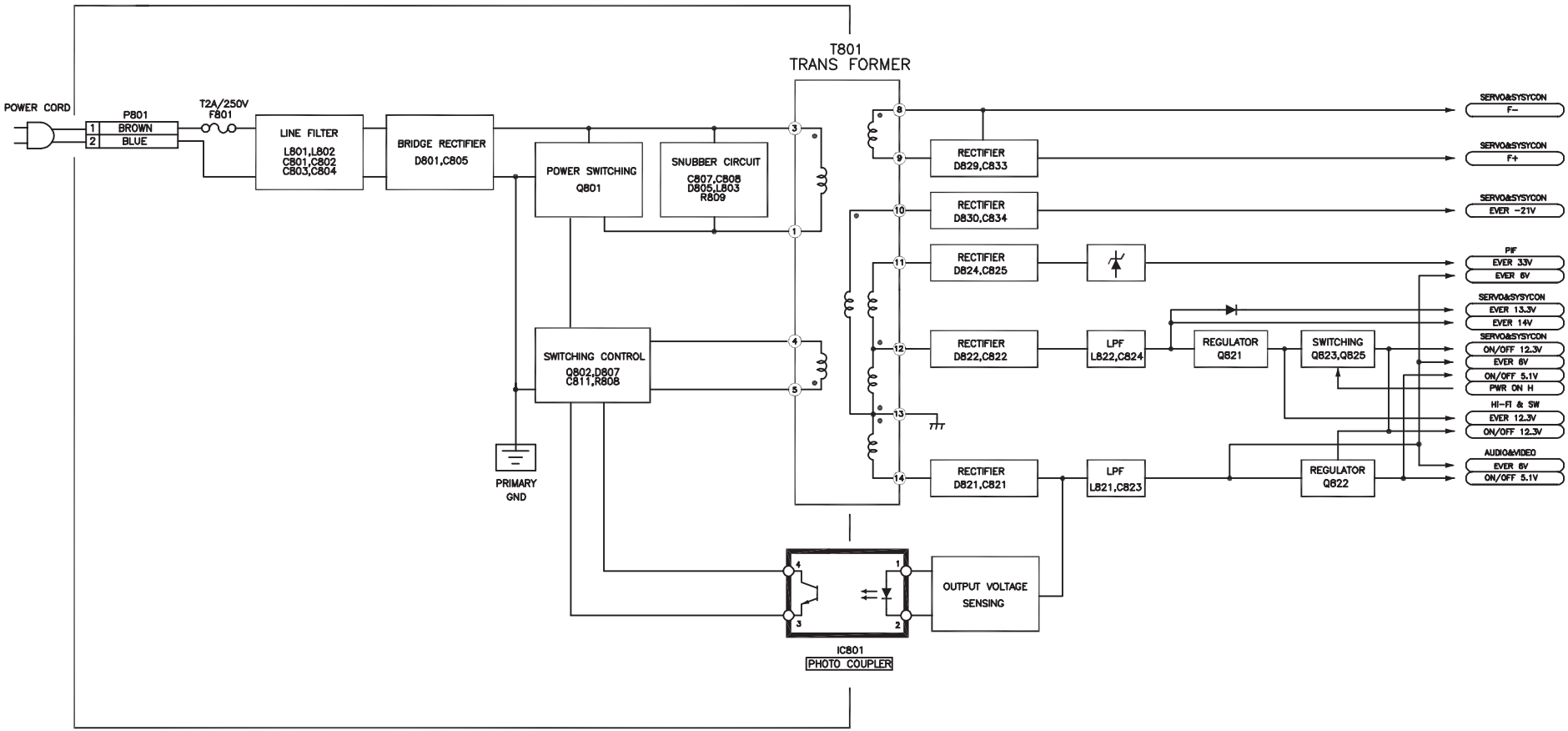


⑤IC801 PIN 4 X : 2V DIV
Y : 5uS DIV

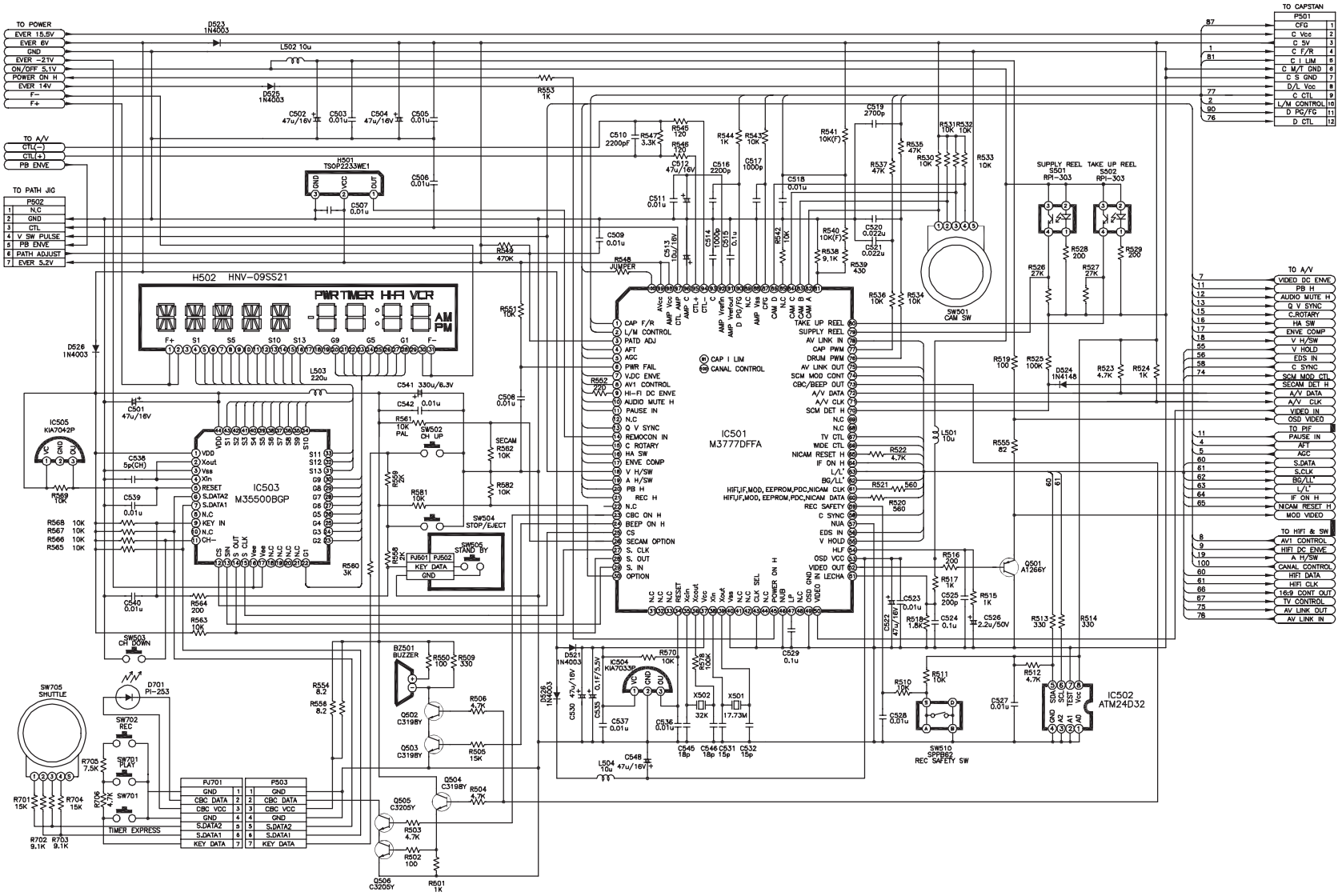


⑥Q801 base X : 0.5V DIV
Y : 5uS DIV

POWER BLOCK DIAGRAM



SYSCON CIRCUIT DIAGRAM



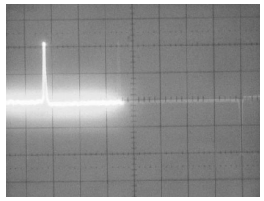
SYSCON		MODE		
LOC.	PIN	EE	PLAY	REC.
IC501	1	0	0	0
	2	2.63	2.61	2.61
	3	4.64	4.97	4.96
	4	2.3	0	2.2
	5	1.8	0	2.1
	6	5.24	5.24	5.22
	7	1.4	2.28	1.13
	8	0.01	4.73	0.01
	9	1.9	1.85	0.14
	10	0.04	0.01	0.01
	11	0.02	0.13	0.02
	12	0.01	0.01	0
	13	5.2	0.01	0.01
	14	5.2	5.2	5.18
	15	2.6	2.6	2.6
	16	5.2	5.2	5.2
	17	2.82	0	0
	18	0	2.61	2.6
	19	2.61	0	2.6
	20	0	5.23	0
	21	0	0	5.13
	22	0.01	0.01	0.01
	23	0.01	0.01	0.01
	24	0.01	0.01	0.01
	25	0.93	0.93	0.93
	26	0.01	0.01	0.01
	27	0.01	0.01	0.01
	28	0.01	0.01	0.01
	29	0.01	0.01	0.01
	30	0.5	1.46	1.47
	31	5.39	5.39	5.37
	32	0.01	0.01	0.01
	33	0.01	0.01	0.01
	34	5.25	5.25	5.23
	35	0	0	0
	36	1.54	1.52	1.53
	37	5.2	5.25	5.1
	38	2.32	2.32	2.31
	39	0	0.01	2.6
	40	0	0.01	0.11
	41	0	0	0.12
	42	5.23	5.23	5.1
	43	5.25	5.23	5.23
	44	0.01	1.5	0.01
	45	5	5	4.9
	46	0.01	0	0.12
	47	1.8	1.86	1.7
	48	0.01	0	0.12
	49	0.02	0	0
	50	1.9	1.97	1.7
	51	3.3	3.3	3.2
	52	1.9	1.97	2.1
	53	5.25	5.25	5.25
	54	2.23	2.23	2.23
	55	1.92	1.97	1.75
	56	1.9	1.98	1.87
	57	0	0	0
	58	4.48	0.33	4.49
	59	5.21	5.21	0
	60	4.82	4.8	4.84
	61	4.96	4.8	4.91

SYSCON		MODE		
LOC.	PIN	EE	PLAY	REC.
	62	0.01	0.03	0
	63	0	0	0
	64	5.18	0	5.18
	65	5.18	0.01	5.18
	66	0.04	0.01	0.12
	67	0	5.2	0
	68	0.01	0.01	0.01
	69	0.01	5.18	0.01
	70	0.01	0.02	0.08
	71	5.04	5.01	5.01
	72	5.01	5.01	5.01
	73	0	0	0
	74	0.3	2.58	0.09
	75	0.03	0	0.09
	76	0	2.5	2.57
	77	0	2.6	2.72
	78	1.33	0	0.09
	79	0	0－5	0－5
	80	5.02	0－5	0－5
	81	1.6	0.01	1.58
	82	5.21	0	0
	83	4.55	5.01	5.01
	84	5.01	5.01	5.19
	85	0.01	0.01	0
	86	5.21	0.01	0
	87	4.23	2.49	2.48
	88	0	0.01	0
	89	0	0.01	1.51
	90	0.01	1.28	1.28
	91	2.58	2.58	2.58
	92	2.6	2.6	2.6
	93	0	0	0
	94	2.8	2.8	2.28
	95	2.56	2.56	2.89
	96	2.56	2.56	2.56
	97	2.57	2.59	2.57
	98	5.01	5.01	5.01
	99	5.22	5.21	5.2
	100	0	0.01	0

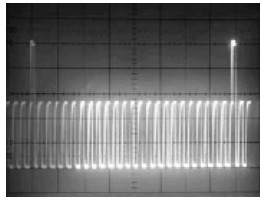
SYSCON		MODE		
LOC.	PIN	EE	PLAY	REC.
IC502	1	0	0	0
	2	0	0	0
	3	0	0	0
	4	0	0	0
	5	4.96	4.85	4.9
	6	4.96	4.88	4.9
	7	0	0	0
	8	5.22	5.22	5.2
IC503	1	5.84	5.83	5.8
	2	2.7	2.64	2.64
	3	0	0	0
	4	2.66	2.65	2.64
	5	5.84	5.81	5.79
	6	5.39	5.39	5.37
	7	5.39	5.39	5.37
	8	1.45	1.38	1.6
	9	5.84	5.82	5.79
	10	1.43	1.38	1.67
	11	5.39	5.39	5.37
	12	0.94	0.94	0.94

SYSCON		MODE		
LOC.	PIN	EE	PLAY	REC.
	13	5.07	5.07	5.05
	14	5.34	5.33	5.32
	15	5.12	5.11	5.09
	16	-20.53	-20.64	-21.02
	17	-20.53	-20.67	-21.02
	18	-20.39	-20.5	-20.86
	19	-20.39	-20.5	-20.86
	20	-20.39	-20.5	-20.86
	21	-20.39	-20.5	-20.86
	22	-17.64	-17.74	-18.07
	23	-17.63	-17.73	-18.06
	24	-17.63	-17.73	-18.06
	25	-17.63	-17.73	-18.06
	26	-17.63	-17.73	-18.06
	27	-17.64	-17.73	-18.06
	28	-17.64	-17.73	-18.07
	29	-17.64	-17.73	-18.07
	30	-17.64	-17.74	-18.07
	31	-17.57	-17.67	-18
	32	-17.57	-17.67	-18
	33	-20.38	-20.49	-18.01
	34	-20.38	-17.68	-20.85
	35	-14.74	-14.85	-15.12
	36	-17.57	-14.88	-15.15
	37	-17.57	-0.89	-3.82
	38	-17.58	-9.29	-12.33
	39	-17.58	-12.07	-12.33
	40	-17.58	-14.87	-15.16
	41	-11.95	-14.87	-20.85
	42	-14.77	-12.08	-18.01
	43	-17.59	-14.9	-12.35
	44	5.84	5.82	5.8

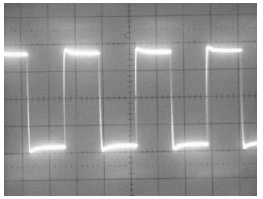
SYSCON		MODE		
LOC.	PIN	EE	PLAY	REC.
Q501	E	2.82	3.06	2.81
	B	2.12	2.35	2.11
	C	0.01	0.01	0.02



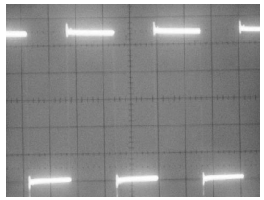
①IC501 PIN97 X : 1V DIV
CTL AMP OUT Y : 5mS DIV



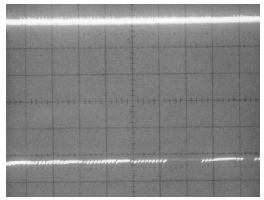
②IC501 PIN89 X : 0.5V DIV
DRUM FG Y : 0.5mS DIV



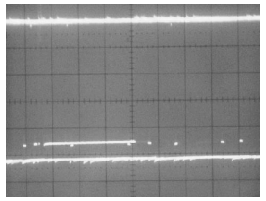
③IC501 PIN87 X : 1V DIV
CAPSTAN FG Y : 0.5mS DIV



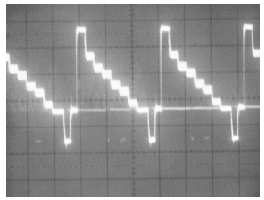
④IC501 PIN77 X : 1V DIV
CAPSTAN PWM Y : 5uS DIV



⑤IC501 PIN61 X : 1V DIV
SERIAL CLK Y : 0.1mS DIV

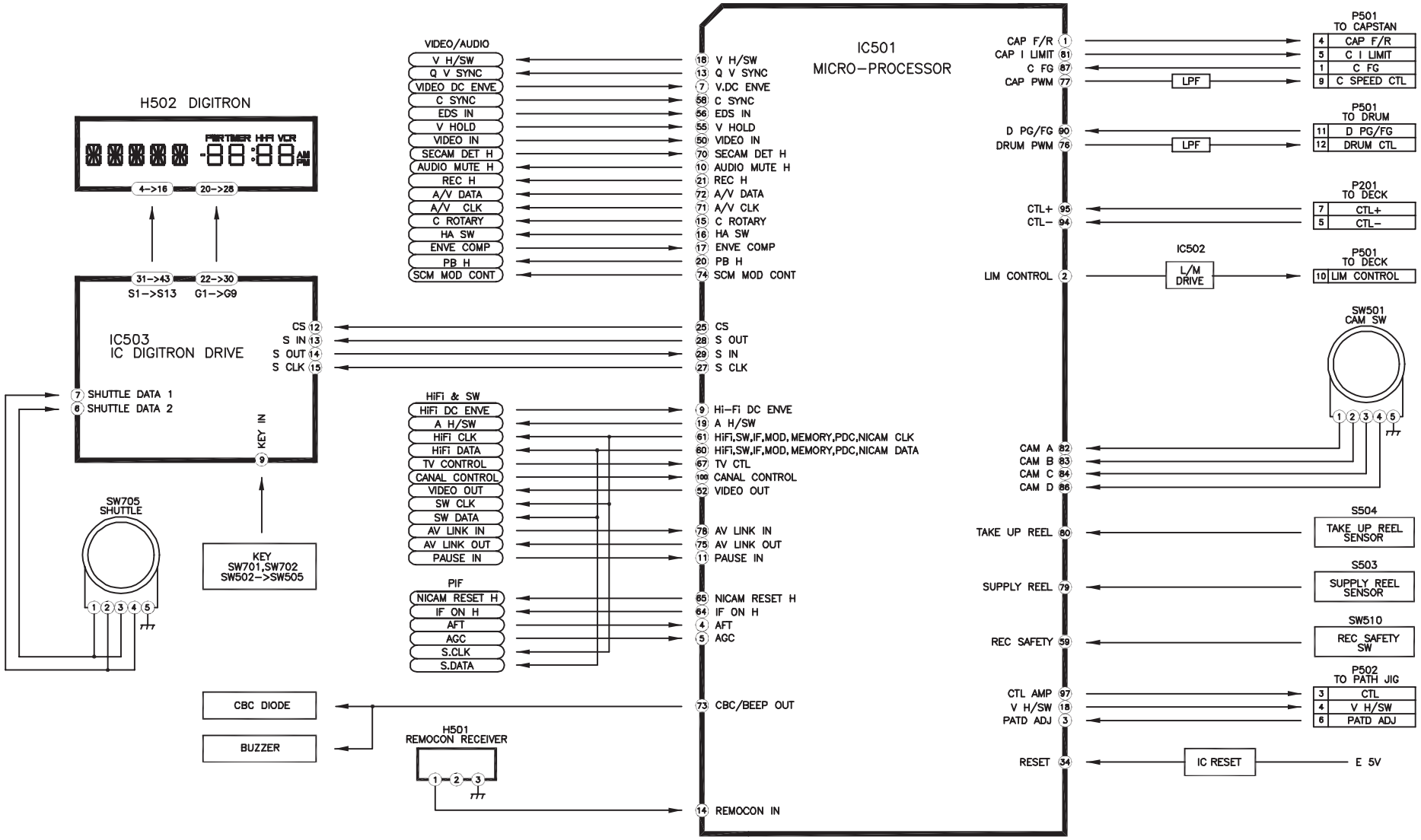


⑥IC501 PIN60 X : 1V DIV
SERIAL DATA Y : 0.1mS DIV

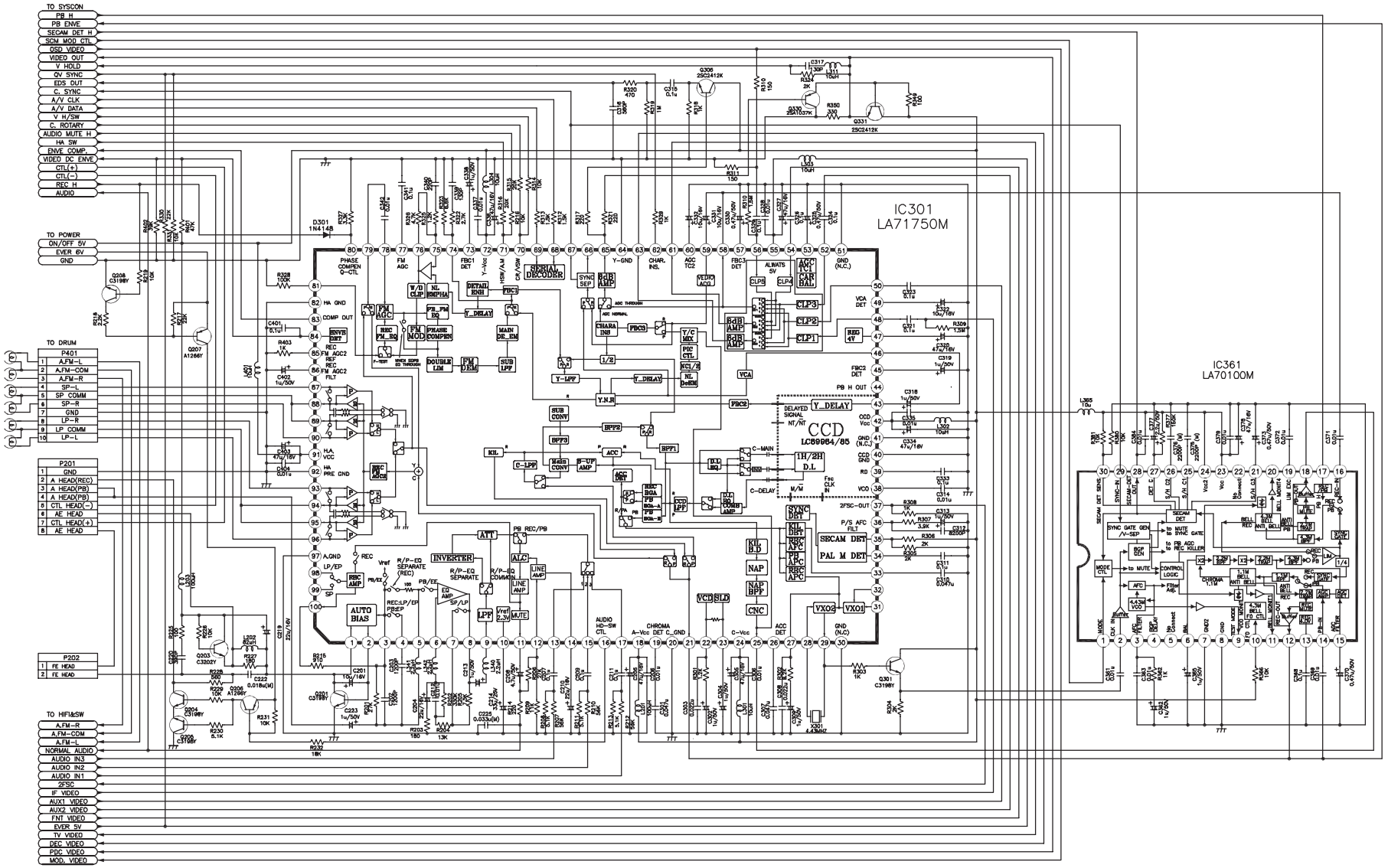


⑦IC501 PIN56 X : 0.5V DIV
EDS IN Y : 20uS DIV

SERVO & SYSCON BLOCK DIAGRAM



A/V & SECAM COLOR CIRCUIT DIAGRAM

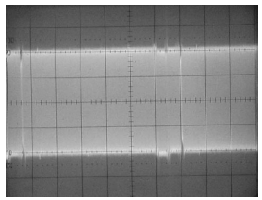


A/V		MODE		
LOC.	PIN	EE	PLAY	REC.
IC301	1	5.09	0.1	0.78
	2	0.03	0.03	0.84
	3	2.29	2.28	2.55
	4	0.33	0.17	0.62
	5	2.28	2.27	2.49
	6	2.29	2.28	2.27
	7	2.28	2.28	2.28
	8	2.28	2.28	2.28
	9	2.28	2.28	2.25
	10	2.29	2.28	2.28
	11	2.4	2.4	2.4
	12	0.02	0.02	0.02
	13	2.29	2.28	2.27
	14	0.05	0.04	0.04
	15	2.29	2.28	2.27
	16	5.16	0.18	5.15
	17	2.29	2.28	2.27
	18	5.15	5.121	5.14
	19	4.21	4.16	4.13
	20	0.02	0.02	0.02
	21	3.32	1.99	3.32
	22	3.2	3.17	3.2
	23	3.2	3.2	3.2
	24	5.16	5.13	5.16
	25	0.16	3.3	0.15
	26	1.42	1.67	1.42
	27	2.1	2.1	2.04
	28	4.2	4.16	4.17
	29	2.79	2.74	2.81
	30	0.02	0	0.02
	31	0	0	0
	32	5.07	4.91	4.97
	33	2.12	2.03	2.11
	34	1.57	1.57	1.57
	35	2.1	2.09	2.1
	36	3.48	3.45	3.59
	37	1.69	1.66	1.72
	38	2.04	2.01	2.08
	39	9.5	9.47	9.48
	40	0.02	0.02	0.02
	41	0.02	0.02	0.02
	42	5.16	5.13	5.15
	43	2.23	2.44	2.23
	44	0.06	4.21	0.04
	45	2.27	2.28	2.29
	46	2.42	2.67	2.43
	47	4.15	4.15	4.16
	48	1.89	1.89	1.88
	49	2.94	3.16	2.94
	50	1.95	1.95	1.93
	51	0.02	0.02	0.02
	52	1.94	1.95	1.92
	53	1.35	2.34	2.18
	54	1.94	1.95	1.92
	55	5.17	5.17	5.14
	56	2.17	2.31	2.16
	57	2	2.15	2
	58	1.98	1.98	1.98
	59	2.93	2.95	2.92
	60	1.43	1.58	1.43
	61	1.57	1.86	1.58
	62	0	0.07	0.07

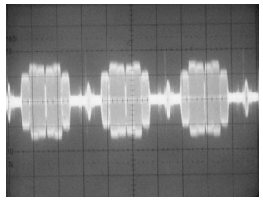
A/V		MODE		
LOC.	PIN	EE	PLAY	REC.
	63	1.19	1.02	1.21
	64	0.02	0.02	0.02
	65	0.85	1.92	0.86
	66	0.06	1.45	0.07
	67	4.49	0.35	4.49
	68	5.05	5.07	5.05
	69	5	5.01	5.01
	70	0.01	2.61	2.6
	71	1.73	1.68	1.67
	72	5.12	5.1	5.11
	73	2.2	2.06	2.2
	74	2.3	2.6	2.31
	75	2.22	0.69	2.23
	76	2.22	0.76	2.23
	77	1.7	1.52	1.6
	78	2.66	3.37	2.67
	79	2.02	1.96	2.52
	80	0.95	0.96	4.53
	81	1.15	1.14	1.15
	82	0.02	0.02	0.02
	83	0.45	1.35	1.28
	84	1.39	2.26	1.13
	85	0.39	0.02	0.66
	86	0.2	0.27	1.63
	87	1.93	1.96	4.35
	88	1.93	1.95	4.33
	89	1.93	1.95	4.33
	90	1.93	1.96	4.35
	91	5.14	5.12	5.12
	92	0.02	0.02	0.02
	93	1.94	0.74	0.73
	94	1.94	0.74	0.73
	95	1.94	0.74	0.73
	96	1.95	0.74	0.73
	97	0	0.02	0.02
	98	2.29	2.29	2.43
	99	2.29	2.29	2.43
	100	2.29	2.29	2.56

A/V		MODE		
LOC.	PIN	EE	PLAY	REC.
Q201	E	0.02	0.02	0.02
	B	0.03	0.03	0.84
	C	5.11	0.1	0.77
Q203	E	3.51	0.1	0.89
	B	3.43	0.04	1.84
	C	5.04	0.04	4.83
Q204	E	0	0.02	-14.24
	B	0	0.7	-19.43
	C	5.11	0.03	1.05
Q205	E	0.14	0.02	-14.15
	B	0	0.71	-18.87
	C	0.02	0.02	0.02
Q206	E	5.16	5.16	5.16
	B	5.16	4.46	5.15
	C	1.81	5.12	-19.1
Q207	E	5.97	5.97	5.91
	B	5.96	5.96	5.11
	C	5.34	0.02	5.07
Q208	E	0	0	0
	B	0	0	0.68
	C	5.96	5.96	0.02
Q301	E	2.14	2.13	2.15
	B	2.78	2.76	2.76
	C	5.16	5.15	5.15
Q305	E	1.4	1.32	1.4
	B	2.03	2.3	2.06
	C	5.17	5.17	5.16
Q330	E	2.73	2.01	2.73
	B	2.05	2.67	2.05
	C	0	0.12	0
Q331	E	2.06	2.32	2.06
	B	2.73	2.98	2.72
	C	5.17	5.17	5.16

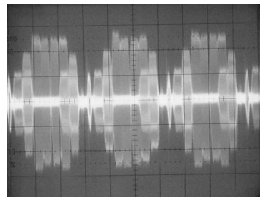
SECAM COLOR		MODE		
LOC.	PIN	EE	PLAY	REC.
IC361	1	2.58	2.58	2.55
	2	2.39	2.4	2.4
	3	3.6	3.59	3.63
	4	2.67	2.66	2.64
	5	0.02	0	0.01
	6	0.38	3.72	0.49
	7	0.02	0.02	0.03
	8	0.02	0.02	0.03
	9	3.13	3.13	3.12
	10	4.83	4.83	4.79
	11	1.96	1.95	2
	12	2.2	1.99	2.28
	13	3.98	3.98	3.99
	14	2.61	2.61	2.58
	15	3.1	2.6	3.13
	16	3.18	3.18	3.19
	17	0	5.23	0
	18	0.14	2.1	0.15
	19	2.27	2.27	2.3
	20	1.9	2.95	1.93
	21	2.04	2.32	2.03
	22	0.9	0	0.01
	23	5.15	5.14	5.13
	24	5.15	5.14	5.13
	25	2.26	2.21	2.27
	26	2.26	2.21	2.24
	27	4.85	4.9	4.84
	28	4.66	4.65	4.64
	29	0.39	0.35	0.39
	30	1.83	1.83	1.83



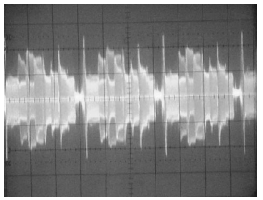
①IC301 PIN78 X : 0.1V DIV
RECY-FM Y : 10uS DIV



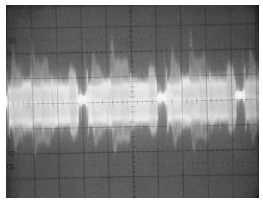
②IC301 PIN21 X : 0.1V DIV
REC COLOR(PAL) Y : 20uS DIV



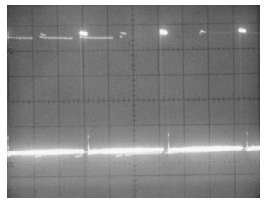
③IC301 PIN25 X : 0.1V DIV
PB COLOR(PAL) Y : 20uS DIV



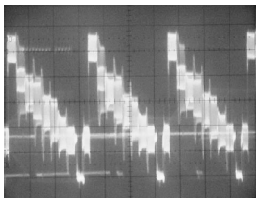
④IC301 PIN25 X : 0.1V DIV
REC COLOR(SCM) Y : 20uS DIV



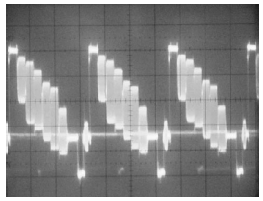
⑤IC301 PIN21 X : 0.1V DIV
PB COLOR(SCM) Y : 20uS DIV



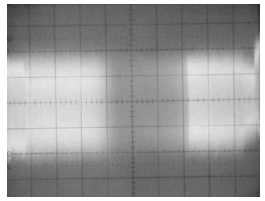
⑥IC301 PIN3 X : 1V DIV
C.SYNC Y : 20uS DIV



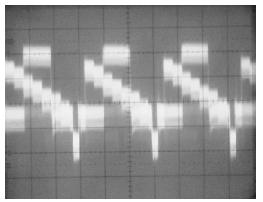
⑦IC301 PIN58 X : 0.2V DIV
REC SECAM Y : 20uS DIV



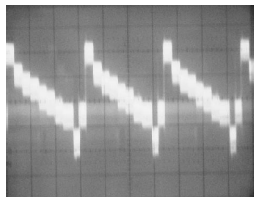
⑧IC301 PIN50 X : 0.2V DIV
VIDEO INPUT(REC) Y : 20uS DIV



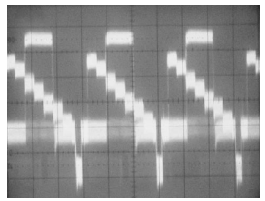
⑨IC301 PIN79 X : 0.1V DIV
PB ENVE Y : 2mS DIV



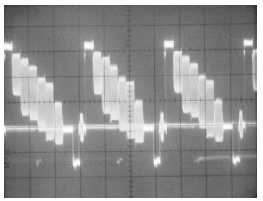
⑩IC301 PIN43 X : 0.1V DIV
Y-DLY OUT(PB) Y : 20uS DIV



⑪IC301 PIN43 X : 0.1V DIV
Y-DLY OUT(REC) Y : 20uS DIV

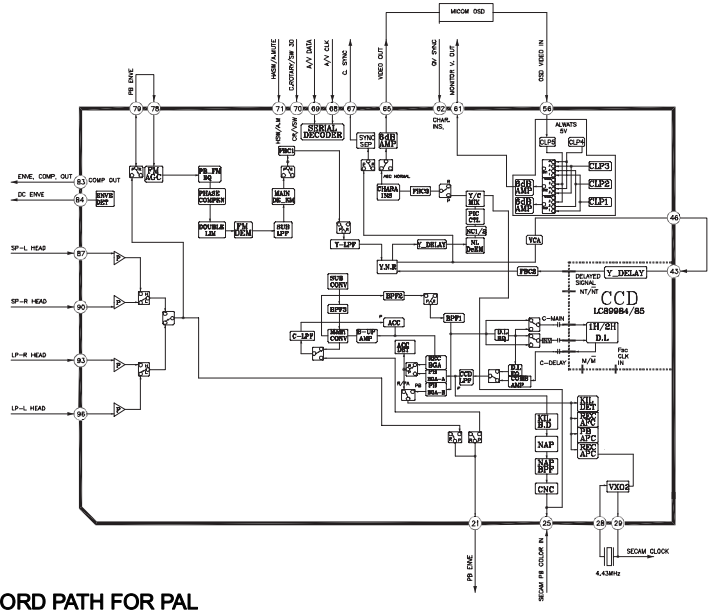


⑫IC301 PIN74 X : 0.1V DIV
DEEMPHA OUT(PB) Y : 20uS DIV

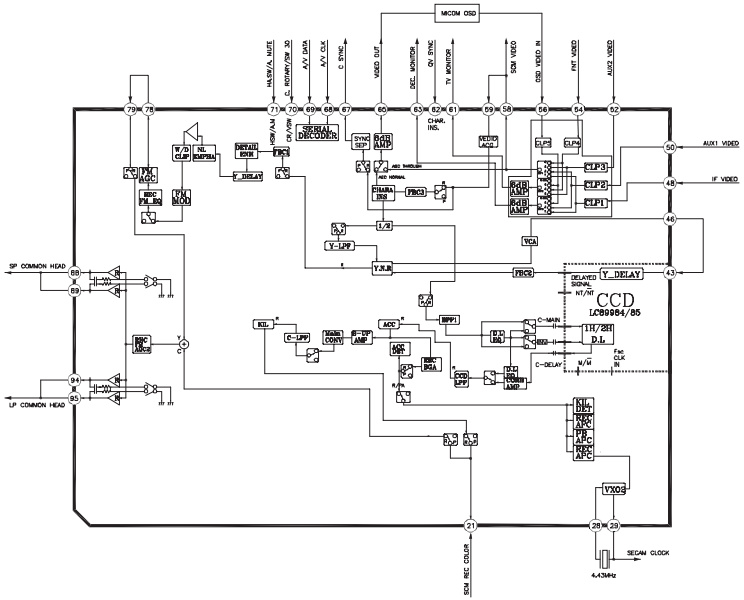


⑬IC301 PIN65 X : 0.5V DIV
VIDEO OUT(REC) Y : 20uS DIV

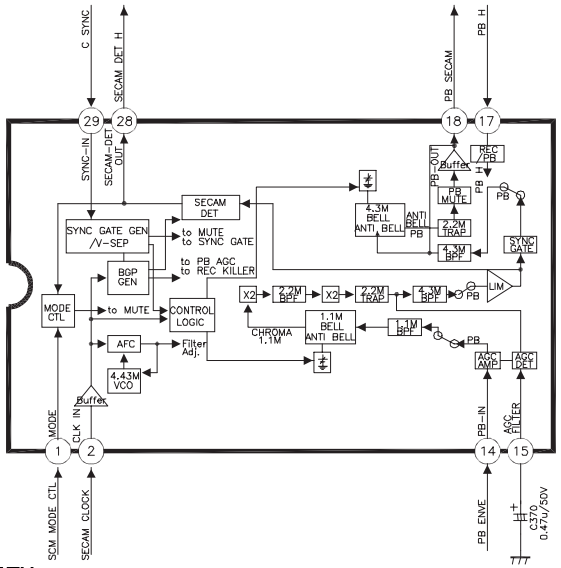
VIDEO PLAYBACK PATH FOR PAL



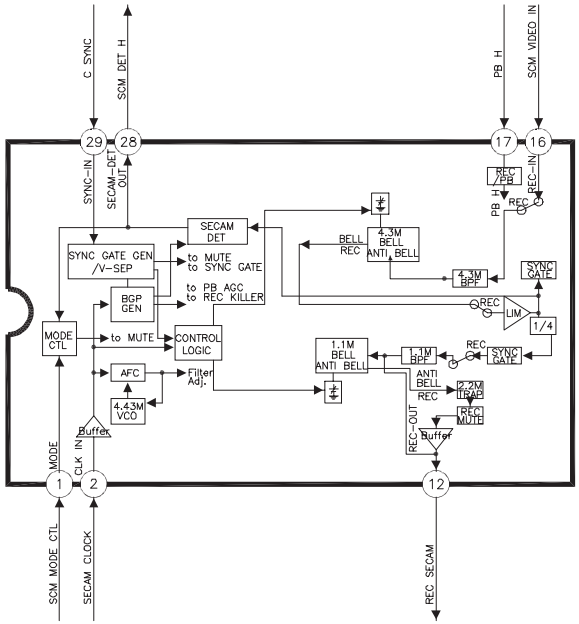
VIDEO RECORD PATH FOR PAL



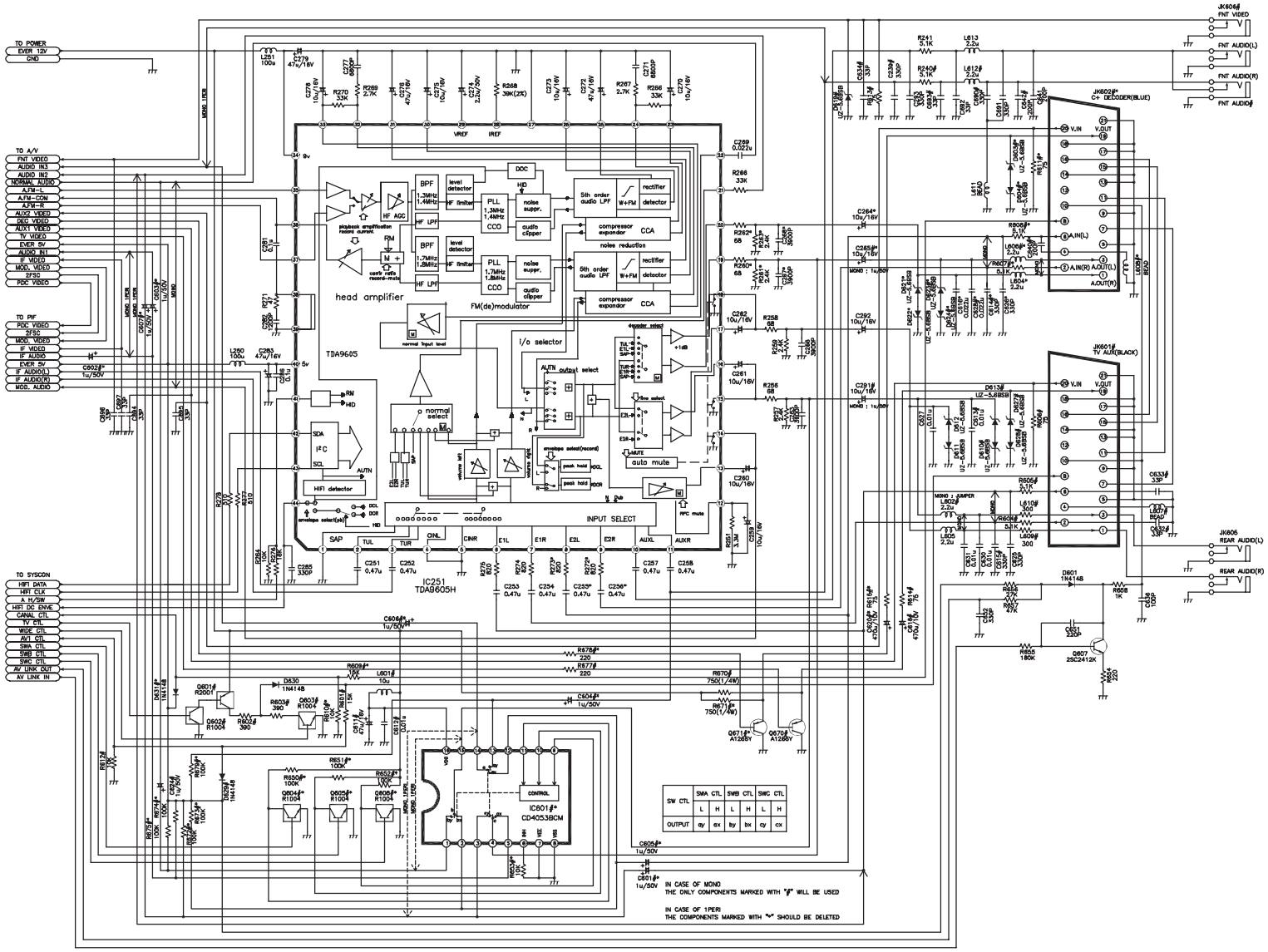
SECAM PLAYBACK PATH



SECAM RECORD PATH

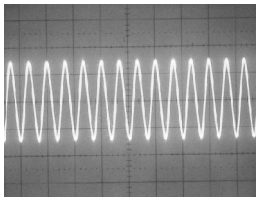


HIFI & SW CIRCUIT DIAGRAM

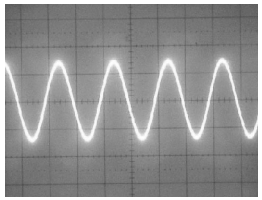


HIFI&SW		MODE		
LOC.	PIN	EE	PLAY	REC.
IC251	1	0.00	0.00	0.00
	2	3.90	3.90	3.90
	3	3.90	3.90	3.90
	4	0.00	0.00	0.00
	5	0.00	0.00	0.00
	6	3.90	3.91	3.91
	7	3.90	3.90	3.90
	8	3.90	3.90	3.90
	9	3.90	3.90	3.90
	10	3.90	3.90	3.90
	11	3.90	3.90	3.90
	12	0.06	0.00	0.00
	13	3.90	3.90	3.90
	14	0.00	0.00	0.00
	15	0.00	0.00	0.00
	16	4.62	4.62	4.64
	17	4.62	4.64	4.64
	18	0.00	0.00	0.00
	19	4.62	4.62	4.64
	20	4.62	4.62	4.64
	21	4.62	4.61	4.64
	22	3.90	3.90	3.90
	23	3.91	3.92	3.92
	24	3.92	3.92	3.92
	25	3.92	3.94	3.92
	26	0.82	0.84	0.84
	27	0.00	0.00	0.00
	28	3.88	3.88	3.90
	29	3.92	3.91	3.92
	30	0.82	0.00	0.82
	31	3.92	0.82	3.92
	32	3.92	3.94	3.92
	33	3.92	3.92	3.92
	34	2.58	3.92	3.92
	35	0.06	12.58	4.34
	36	0.64	0.64	4.32
	37	0.64	0.64	4.34
	38	0.00	0.64	4.28
	39	0.00	0.00	0.00
	40	5.18	0.00	5.10
	41	0.94	5.20	0.94
	42	4.75	0.94	4.74
	43	4.86	4.81	4.81
44		1.98	1.97	1.97

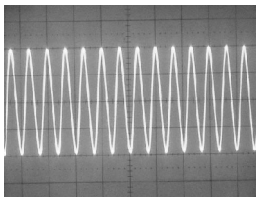
HIFI&SW		MODE		
LOC.	PIN	EE	PLAY	REC.
IC601	1	5.13	5.14	5.13
	2	5.16	5.16	5.15
	3	5.16	5.16	5.13
	4	5.15	5.15	5.14
	5	5.16	5.14	5.16
	6	0	0.01	0.01
	7	0.01	0.01	0.01
	8	0.01	0.01	0.01
	9	12.19	0.01	12.26
	10	12.19	12.23	12.26
	11	0.01	0.01	0.01
	12	5.16	5.15	5.15
	13	5.14	5.14	5.13
	14	5.16	5.17	5.13
	15	5.14	5.15	5.13
	16	12.32	12.35	12.38
LOC.	PIN	EE	PLAY	REC.
Q601	E	12.5	12.58	12.59
	B	12.5	0.06	12.57
	C	0.04	12.57	0.05
Q602	E	0.01	0.01	0.02
	B	0	5.16	0
	C	12.5	0.06	12.58
Q603	E	0.01	0.01	0.02
	B	0	0	0
	C	0.04	12.38	0.05
Q670	E	2.28	2.85	2.28
	B	1.59	2.16	1.59
	C	0.01	0.01	0.01
Q671	E	1.91	1.74	1.91
	B	1.22	1.04	1.22
	C	0.01	0.01	0.01



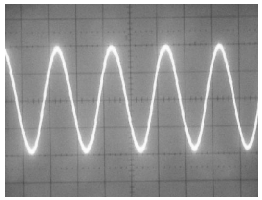
①IC251 PIN2 X : 0.1V DIV
IF A.IN LEFT Y : 0.5mS DIV



②IC251 PIN3 X : 0.5V DIV
IF A.IN RIGHT Y : 0.5mS DIV

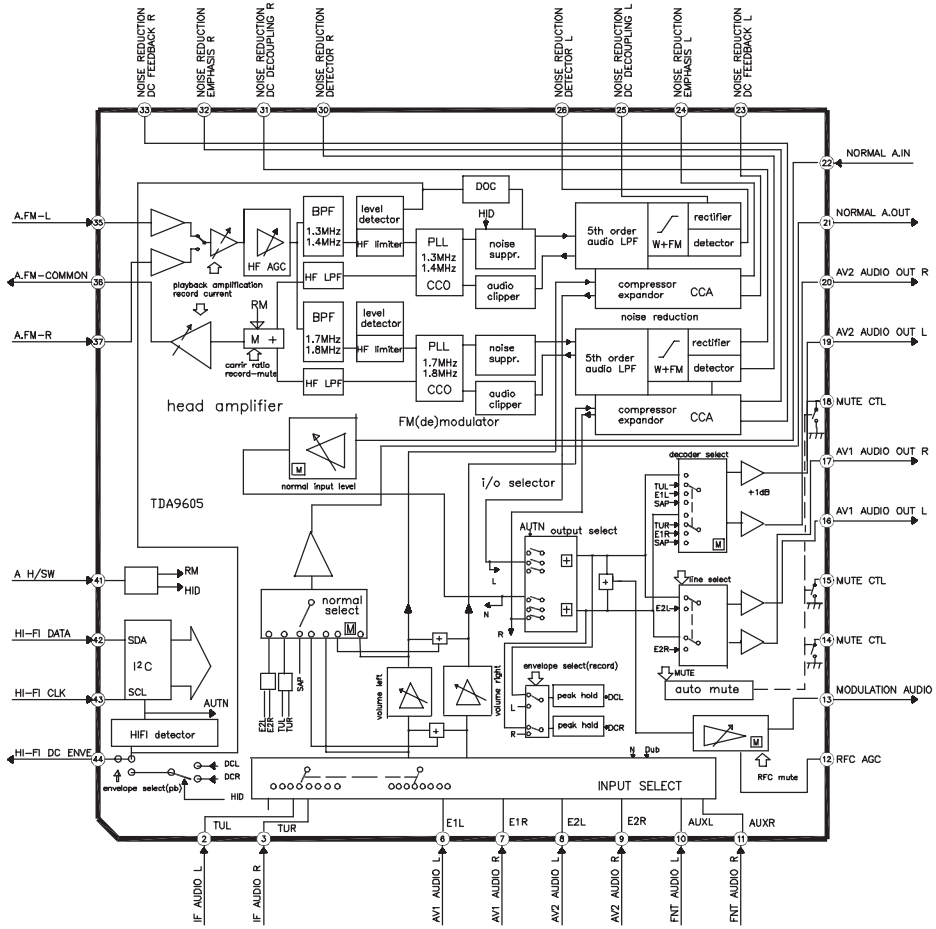


③IC251 PIN16 X : 0.5V DIV
A.OUT LEFT Y : 0.5mS DIV

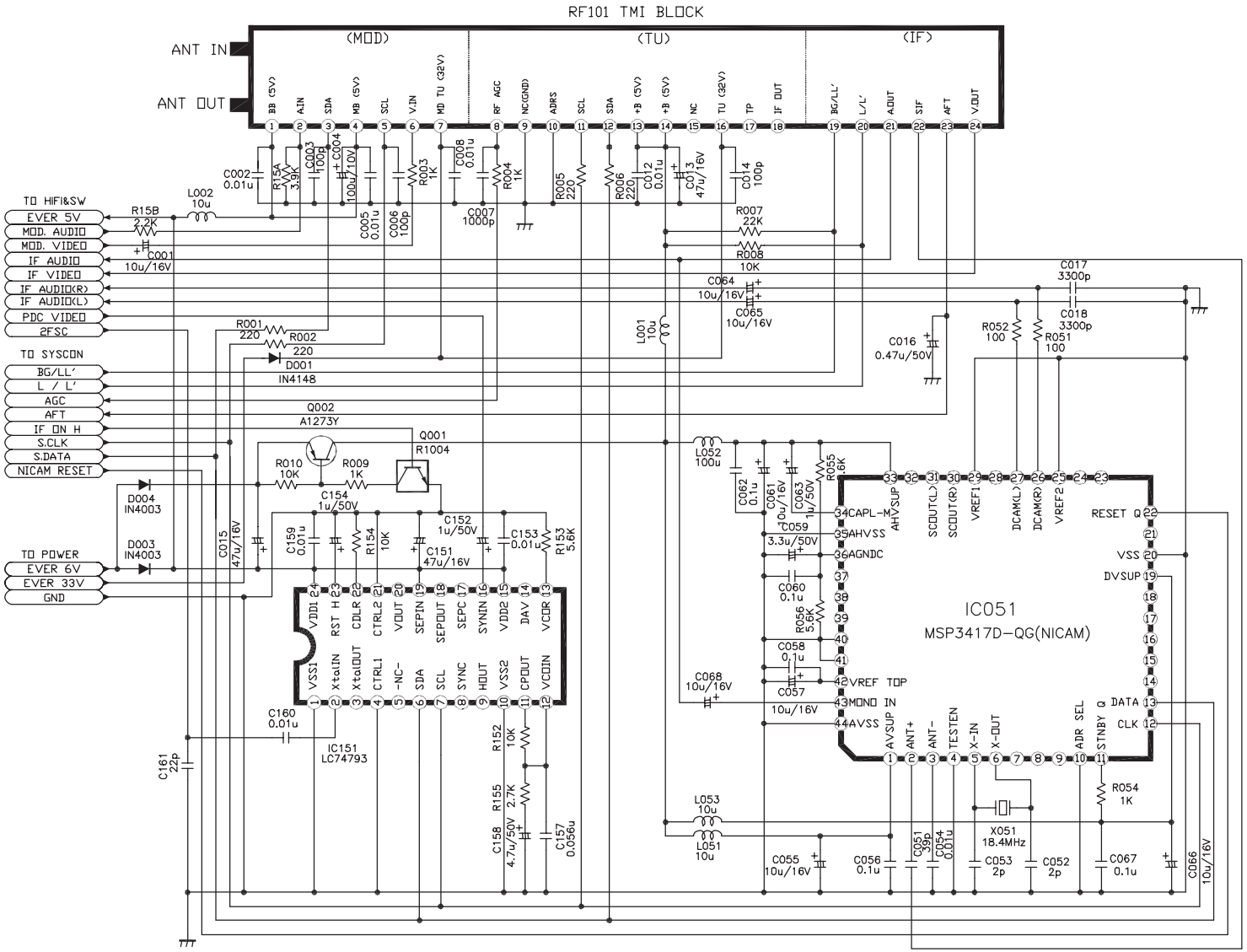


④IC251 PIN17 X : 0.5V DIV
A.OUT RIGHT Y : 0.5mS DIV

HIFI BLOCK DIAGRAM



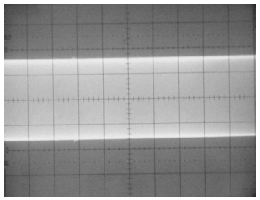
PIF CIRCUIT DIAGRAM



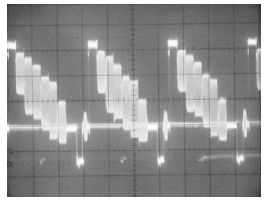
PIF		MODE		
LOC.	PIN	EE	PLAY	REC.
IC051	1	5.02	0.00	5.02
	2	1.52	0.07	1.52
	3	1.52	0.00	1.52
	4	0.00	0.00	0.02
	5	2.44	0.07	2.44
	6	2.27	0.07	2.32
	7	0.08	0.07	0.3
	8	0.00	0.07	0.02
	9	0.00	0.07	0.02
	10	0.00	0.00	0.02
	11	5.07	0.00	5.07
	12	4.83	4.83	4.83
	13	4.84	4.76	4.77
	14	2.52	0.05	2.54
	15	2.54	0.07	2.56
	16	2.51	0.08	2.52
	17	0.10	0.08	0.32
	18	0.08	0.08	0.30
	19	5.08	0.00	5.08
	20	0.00	0.00	0.02
	21	0.02	0.00	0.36
	22	5.22	0.00	5.22
	23	0.00	0.00	0.00
	24	0.00	0.00	0.00
	25	0.00	0.00	0.02
	26	1.40	0.00	1.42
	27	1.40	0.00	1.42
	28	0.00	0.00	0.00
	29	0.00	0.00	0.02
	30	2.56	0.04	2.58
	31	0.00	0.04	2.56
	32	5.08	0.00	0.00
	33	2.53	0.00	5.08
	34	0.00	0.00	2.53
	35	2.56	0.00	0.00
	36	0.00	0.00	2.56
	37	0.00	0.00	0.00
	38	0.00	0.00	0.00
	39	0.00	0.00	0.00
	40	0.00	0.00	0.00
	41	0.00	0.00	0.00
	42	2.60	0.00	2.26
	43	2.56	0.04	2.56
	44	0.00	0.00	0.00

PIF		MODE		
LOC.	PIN	EE	PLAY	REC.
IC151	1	0.02	0.01	0.02
	2	2.66	2.68	2.64
	3	2.66	2.70	2.66
	4	0.02	0.00	0.02
	5	0.00	0.00	0.00
	6	4.83	4.75	4.71
	7	4.87	4.83	4.76
	8	5.22	5.26	5.20
	9	4.84	4.86	4.80
	10	0.02	0.00	0.02
	11	2.30	2.31	2.28
	12	2.30	2.32	2.28
	13	1.32	1.00	0.98
	14	0.00	0.00	0.01
	15	5.24	5.26	5.20
	16	3.16	3.12	3.07
	17	2.60	2.62	2.57
	18	4.80	4.84	4.77
	19	5.24	5.26	5.20
	20	5.18	5.21	5.14
	21	0.02	0.00	0.02
	22	3.80	3.82	3.77
	23	5.20	5.24	5.18
	24	5.24	5.26	5.20

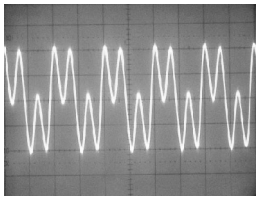
PIF		MODE		
LOC.	PIN	EE	PLAY	REC.
Q001	E	0.002	0.002	0.002
	B	0.01	0.01	0.012
	C	5.86	5.86	5.86
Q002	E	5.86	5.86	5.86
	B	5.82	5.86	5.8
	C	0.012	0.012	0.018



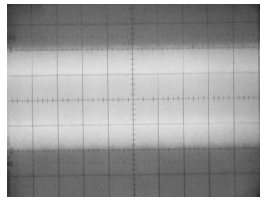
①IC151 PIN2 X : 0.5V DIV
2FSC IN Y : 2uS DIV



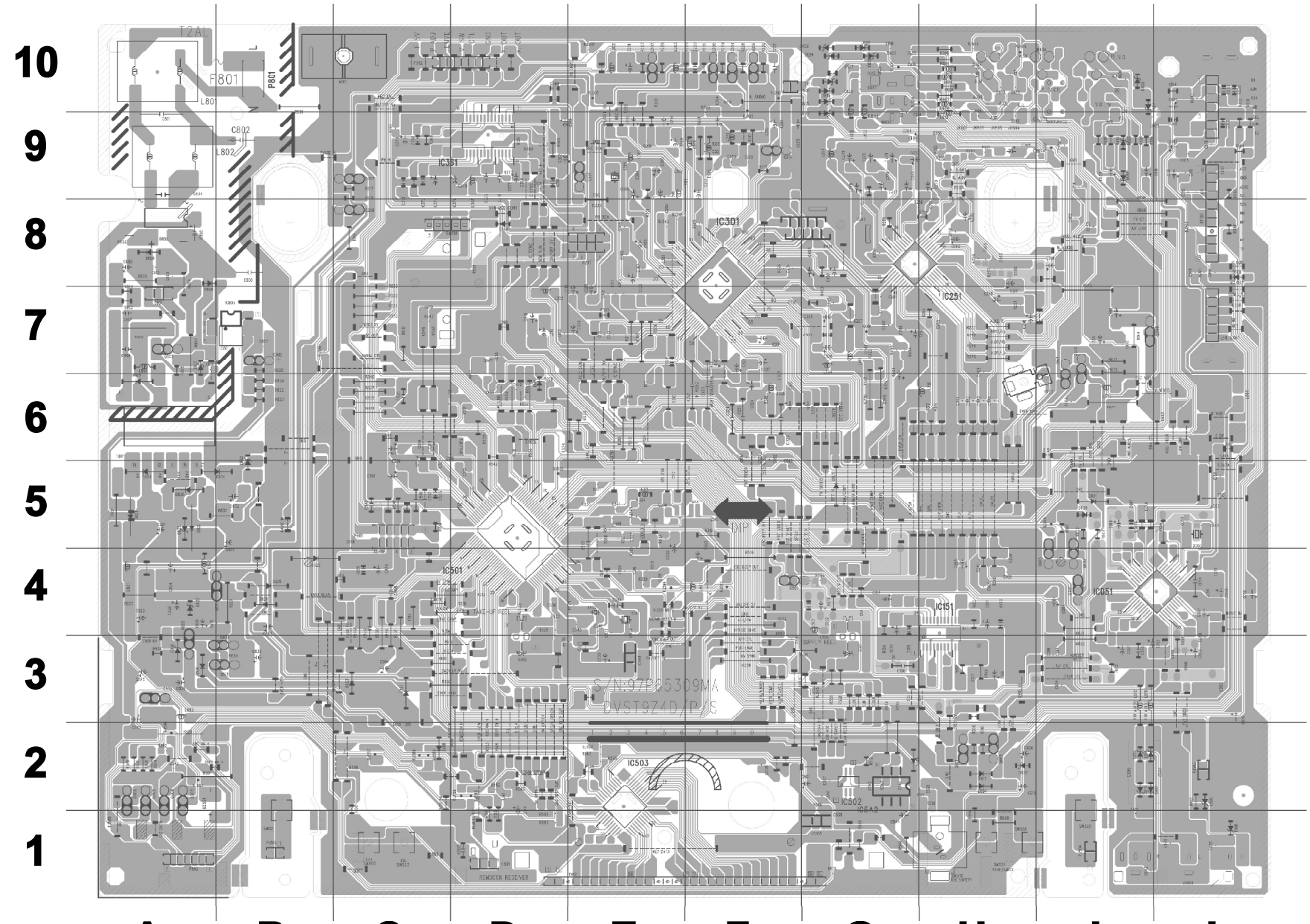
②IC151 PIN16 X : 0.5V DIV
PDC V.IN Y : 20uS DIV

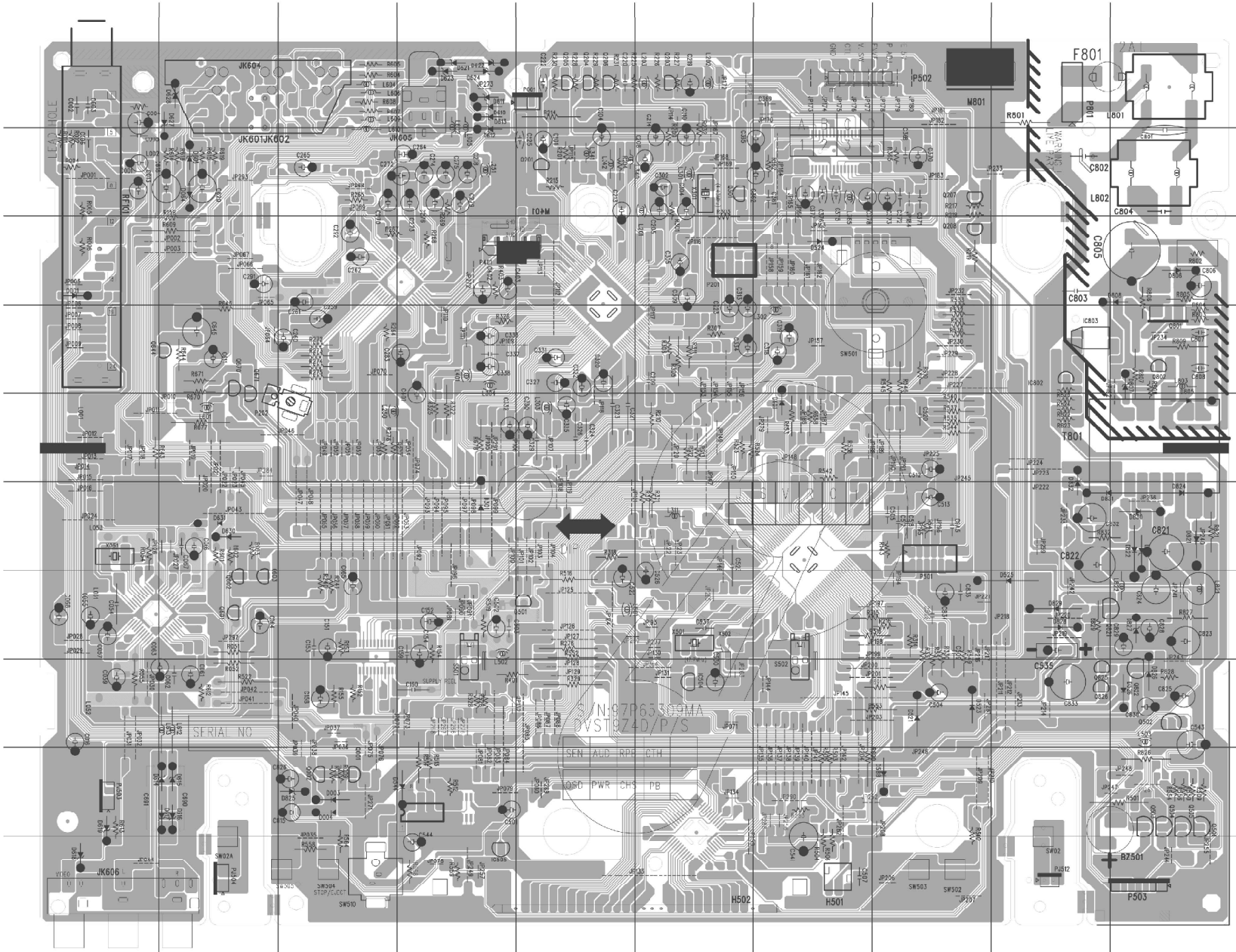


③IC051 PIN43 X : 0.2V DIV
MONO IN Y : 0.5mS DIV



④IC051 PIN2 X : 0.1V DIV
SIF IN Y : 0.5mS DIV


10
9
8
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
T2A
F801
P801
L801
C802
L802
IC351
IC301
IC251
IC501
IC151
IC051
IC503
IC502
IC6A2
REMOCON RECEIVER


10
9
8
7
6
5
4
3
2
1
J
I
H
G
F
E
D
C
B
A
41
42

T5 STEP-UP COMPONENTS LOCATION

C001	J9
C002	J10
C003	J10
C004	J10
C005	J9
C5A1 *	G2
C5A2 *	G2
C5A3 *	G2
C5A5	C5
C006	J9
C007 *	J9
C008 *	J9
C010 *	J9
C011 *	J9
C012 *	J9
C013	J9
C014 *	J8
C015	H2
C016	J3
C017 *	I3
C018 *	I3
C051 *	J5
C052 *	J5
C053 *	J5
C054	J4
C055	J4
C056 *	J4
C057	J4
C058 *	J3
C059	J3
C060 *	J3
C061	I3
C062	I3
C063	I3
C064	I4
C065	H4
C066	I5
C067	I5
C068	J4
C151	H4
C152	G4
C153	H4
C154	G4
C157 *	H3
C158	H3
C159	G4
C160	G3
C161 *	G3
C201	F9
C202 *	F9
C203 *	F9
C204	F9
C205	E9
C206 *	E9
C208	E9
C209	E7
C210	E9
C212 *	F9
C213	F9
C214	E9
C215 *	F9
C219	E10
C220	F10
C222	F10
C223	E7
C225	F9
C239 *	H4
C251 *	H6
C252 *	H6
C253 *	I8
C254 *	I9
C255 *	I8
C256 *	I9
C257 *	H6
C258 *	H6
C259	H7
C260	H7
C261	H8
C262	H8
C263 *	H8
C264	G9
C265	H9
C266 *	H8
C267 *	I9
C268 *	H9
C269 *	H9
C270	H9
C271 *	H8
C272	G9
C273	G9
C274	G9
C275	G9
C276	G9
C277 *	G9
C278	G9
C279	G9
C280 *	G8
C281 *	G7
C282 *	G7
C283	G7
C285 *	H7
C286 *	G7
C291	I8
C292	H8
C293 *	H7
C301 *	E8
C302	E9
C303 *	E9
C304	E9
C305	E8
C306 *	E9
C307 *	E8
C308 *	E8
C309	E8
C310 *	E7
C311 *	E7
C312 *	E7
C313	E7
C314 *	E7
C315 *	E4
C316 *	E4
C317 *	E5
C318	D7
C319	D7
C320	F7
C321	F6
C322	F7
C323	F6
C324	F6
C325	F6
C326	F6
C327	F7
C328 *	F6
C329	F6
C330	F6
C331	F7
C332	G6
C333 *	E7
C334	E7
C335 *	D7
C336	G7
C337	G7
C338	G7
C339 *	G6
C340 *	G6
C341 *	G7
C342 *	G7
C361	D9
C362	D9
C363 *	D9
C365	D9
C368	C9
C369	D10
C370	C9
C371	C9
C372	C9
C373	C9
C375	D9
C376	D9
C377 *	D9
C378	D9
C379 *	D9
C384 *	D9
C401	G6
C402	G8
C403	G8
C404 *	F8
C501	G2
C502	G4
C503	G4
C504	C3
C505	C5
C506 *	C5
C507	D1
C508	C4
C509	C4
C510 *	C7
C511 *	C6
C512	C6
C513	C5
C514 *	C6
C515 *	D5
C516 *	C6
C517	C5
C518	C5
C519 *	C5
C520	C6
C521 *	D6
C522	F4
C523	E5
C524 *	E5
C525 *	E5
C526	E4
C527 *	G2
C528 *	H2
C529 *	E4
C530	E3
C531 *	E4
C532 *	E4
C535	B4
C536 *	D4
C537	E4
C538 *	F2
C539 *	G2
C540 *	G2
C541	D1
C542 *	A2
C543	A3
C544	G1
C545 *	E4
C546 *	E4
C611	I7
C612 *	I7
C613 *	G10
C614 *	G9
C615 *	G10
C616 *	G10
C618	I9
C620	I9
C625 *	G10
C626 *	G10
C627 *	G10
C628 *	G10
C630 *	G10
C631 *	G9
C632 *	H10
C633 *	H10
C634 *	I3
C635 *	J1
C636 *	D7
C640 *	H9
C641 *	J1
C642 *	I1
C644 *	G10
C645	I7
C651 *	D6
C652 *	D6
C688 *	H4
C689 *	H4
C690 *	F6
C691 *	F6
C692 *	F6
C693 *	F5
C801	A9
C802	B9
C803	B8
C804	A9
C805	A8
C806	A8
C807	A7
C808	A7
C809 *	A8
C810 *	A8
C811 *	A7
C821	A5
C822	B5
C823	A4
C824	A4
C825	A3
C826	H2
C827 *	B7
C828	A4
C829	A4
C830	A3
C831 *	B4
C832	B5
C833	B3
C834	C4
C835	C4

L001	J6
L002	J9
L051	J4
L052	J3
L053	J5
L154	A8
L166	D6
L167	D5
L169	D5
L197	D5
L201	E9
L202	E10
L203	E10
L250	H6
L251	G9
L301	E9
L302	D7
L303	F6
L304	G7
L311	E5
L340	F9
L341	F9
L342	F9
L365	D9
L401	G7
L424	D5
L501	F4
L502	G4
L503	A3
L601	I6
L602	G9
L604	H10
L605	G9
L606	H10
L607 *	H10
L608 *	H9
L609	H10
L610	H9
L612	I3
L613	I3
L642	F8
L801	A10
L802	A9
L803	A7
L821	A4
L822	A4
L825	F8
L826	F8
L840	G8
L853	G8
L854	G8
L891	J4
L892	J4
L893	J4
L895	I3
L896	I4
L897	I4
L898	I4
L899	I4
L900	I4
L901	I4
L902	I4
L903	I4
L904	I4
L905	J4
L906	I4
L907	J5
L908	J5
L909	J5
L910	J5
L911	I5
L912	I5
L913	J5
L914	J8
L915	J8
L916	J9
L943	F9
L944	E7
L945	E7
L946	E7
L947	E7
L948	E7
L949	E7
L950	F7
L951	H8
L954	H8
L955	G7
L956	H6
L957	H6
L958	H6
L959	H6
L961	D7
L966	F5
L968	E4
L970	E4
L971	D3
L972	D4
L973	D4
L974	E5
L975	E5
L976	E5
L977	E5
L978	E5
L980	G4
L981	H4
L982	H4
L983	H4
L984	H3
L985	H3
L986	H3
L987	H3
L988	J7
L989	D9
L990	D9
L991	C9
L992	C9
L993	C9
L994	C9
L997	E4
L998	E8
L999	E8

D001	J8
D003	H2
D004	H2
D064	I9
D301	G5
D521	C3
D523	C3
D524	D8
D525	B4
D526	A3
D544	G2
D588	C2
D601	D6
D603	I9
D610	G10
D611	G10
D612	G9
D613	G10
D614	I2
D615	I2
D616	I2
D617	I2
D618	J1
D619	J2
D621	G10
D622	G10
D623	G10
D624	G10
D627	I10
D628	I10
D630	I5
D631	I5
D801	A8
D805	A6
D806	A8
D807	A7
D808	A8
D821	A5
D822	A5
D823	A5
D824	A5
D825	H2
D826	A3
D827	A4
D828	B4
D829	B4
D830	A5
D831	B5
D832	B5

BZ501	A2
F801	B10
H501	D1
H502	F1
JK601JK602	H10
JK604	I10
JK605	G10
JK606	I1
M801	B10
RF101	J10
S501	G3
S502	D3
T801	A5

P201	E8
P202	I7
P401	G8
P501	C4
P502	C10
P503	A1
P601	F10
P801	B10
PJ503	J2
PJ504	I1
PJ512	B10

IC5A2	G2
IC051	J4
IC151	G3

* SOLDER SID - COT CUIVRE - C SEITE - LATO SALDATURE - LADO DEL COBRE

IC251	G8
IC301	F8
IC361	D9
IC501	D5
IC502	G2
IC503	E1
IC504	E3
IC505	G1
IC801	B7
IC802	B7
IC803	B7

JP001	J9
JP002	I8
JP003	I8
JP005	J8
JP006	J7
JP007	J7
JP008	J7
JP009	J7
JP010	I6
JP011	J6
JP012	J6
JP013	J6
JP014	J6
JP015	J6
JP016	J5
JP017	J6
JP018	J6
JP019	I6
JP020	I5
JP021	I6
JP022	I6
JP023	I6
JP024	J5
JP026	I5
JP027	I5
JP028	J4
JP029	J4
JP030	J3
JP031	J3
JP032	J3
JP035	H1
JP036	H3
JP037	H3
JP038	H2
JP039	H2
JP040	H3
JP041	I3
JP042	I3
JP043	I5
JP044	J1
JP045	I6
JP046	H6
JP047	H5
JP048	H5
JP049	H6
JP050	H6
JP051	H6
JP052	H6
JP053	H6
JP054	G6
JP055	H5
JP056	H5
JP057	H5
JP058	H5
JP059	H5
JP060	H5
JP061	H5
JP062	H5
JP063	G5
JP064	I7
JP065	I8
JP066	I8
JP067	I8
JP068	H9
JP069	H9
JP070	H7
JP071	E3
JP072	H3
JP073	G3
JP074	G6
JP075	H3
JP076	H2
JP078	G1
JP079	G2
JP080	F2
JP081	G2
JP082	G2
JP083	G3
JP084	G3
JP085	F3
JP086	F3
JP087	F3
JP088	F3
JP089	G4
JP090	G4
JP091	G4
JP092	G5
JP093	G5
JP094	G5
JP095	G5
JP096	G5
JP097	G5
JP098	G5
JP099	G5
JP100	G5
JP101	F5
JP102	F5
JP103	F5
JP104	F5
JP105	G6
JP106	F6
JP107	F6
JP108	F5
JP109	G7
JP110	G7
JP111	G7
JP112	F8
JP113	F8
JP114	E9
JP115	F9
JP116	E8
JP117	E7
JP118	F7
JP119	F5
JP120	E6
JP121	F5
JP122	E5
JP123	E5
JP124	F4
JP125	F4
JP126	F4
JP127	F4
JP128	F3
JP129	F3
JP130	E4
JP131	E3
JP132	G3
JP133	E1
JP134	E2
JP135	D2
JP136	D2
JP137	D2
JP138	D2
JP139	D2
JP140	D2
JP141	D2
JP142	D2
JP144	D3
JP145	D3
JP146	E5
JP147	E6
JP148	D6
JP149	E6
JP150	E6
JP153	E7
JP154	E7
JP155	E7
JP156	E7
JP157	D7
JP158	D8
JP159	D8
JP160	D8
JP161	D8
JP162	D8
JP163	D8
JP164	D9
JP165	D9
JP166	D9
JP167	E9
JP168	E9
JP169	E9
JP170	D10
JP171	E10
JP172	E10
JP173	D10
JP174	D10
JP175	D10
JP176	D10
JP177	D10
JP178	C10
JP179	C10
JP180	C10
JP181	C10
JP182	C10
JP183	C9
JP184	C9
JP186	D6
JP187	D6
JP188	D6
JP189	C6
JP190	C6
JP191	C6
JP192	A7
JP193	E4
JP194	C4
JP195	C5
JP196	C5
JP197	C4
JP198	C4
JP199	C4
JP200	D3
JP201	D3
JP203	C3
JP204	D2
JP206	C1
JP207	C1
JP208	C2
JP209	C2
JP210	C2
JP211	B3
JP212	B3
JP213	B3
JP214	B3
JP216	C4
JP217	C4
JP218	B4
JP219	B4
JP220	B4
JP221	C4
JP222	B5
JP223	B6
JP224	B6
JP225	C6
JP227	C7
JP228	C7
JP229	C7
JP230	C7
JP232	C8
JP233	B9
JP234	A7
JP235	B5
JP236	A5
JP240	A5
JP241	A4
JP242	B4
JP243	A3
JP244	A1
JP245	C5
JP246	C3
JP247	A2
JP248	A2
JP249	G1
JP250	E10
JP255	A1
JP256	D2
JP257	G1
JP259	B5
JP261	A2
JP262	D2
JP263	E3
JP264	E3
JP265	E4
JP266	G3
JP267	G3
JP268	G3
JP269	F4
JP271	H2
JP272	G8
JP273	G10
JP276	G3
JP277	E4
JP279	D6
JP281	C3
JP282	D2
JP284	I6
JP288	D2
JP289	F2
JP290	D2
JP291	G6
JP292	I4
JP293	I9

R001	J9
R002	J9
R003 *	J9
R004	J9
R005	J9
R006	J8
R007 *	J8
R008 *	J8
R009	H2
R010	H2
R15A	J10
R15B	I8
R051	I4
R052	I3
R054	J5
R055	J3
R056 *	J3
R152	H3
R153	H4
R154	G4
R155	H3
R201	F9
R202 *	F9
R203 *	F9
R204	F9
R205 *	F8
R206 *	E9
R209	E9
R210	E6
R211 *	E6
R214	F10
R215	F9
R216	C4
R217	C9
R218	C9
R219	C8
R225	F10
R226	E10
R227	E10
R228	F10
R229	F10
R230	F10
R231	F10
R232	E9
R240	H4
R241	H4
R251 *	H7
R256 *	H8
R257 *	H8
R258 *	H8
R259 *	H8
R260 *	H9
R261 *	H9
R262 *	H9
R263 *	H9
R264	H7
R265	H9
R266 *	G8
R267	H8
R268	G8
R269	G9
R270 *	G8
R271 *	G7
R272	H7
R273	H7
R274	H7
R275	H7
R276	F4
R277	H6
R278	H6
R301	E9
R302 *	E8
R303	E8
R304 *	D9
R305	E7
R306	E7
R307	E7
R308 *	E6
R309 *	F6
R310 *	F6
R311	E7
R312	E6
R313	E6
R314	C4
R315	C4
R316	D4
R317	E5
R318	F5
R319 *	E4
R320 *	E4
R321	E5
R322	G6
R323 *	G6
R324 *	E5
R325	G6
R326	G7
R327 *	G7
R328 *	F8
R329	F3
R330	C4
R331	C4
R349 *	E5
R350 *	E5
R362	D9
R365	C9
R366 *	C9
R377	D9
R380 *	D9
R381 *	D9
R401	G3
R402 *	F3
R403	G8
R404 *	G7
R405 *	G7
R501	A2
R502 *	A2
R503	D2
R504	D1
R505	D2
R506	D1
R509	A2
R510 *	H2
R511 *	G2
R512	G2
R513	G2
R514	G2
R515 *	E5
R516	F4
R517 *	E5
R518 *	E5
R519	G4
R520 *	E5
R521 *	E5
R522	I3
R523	E6
R524	E6
R525 *	D8
R526	G3
R527 *	D4
R528	G3
R529 *	D4
R530	C7
R531	C7
R532	C7
R533	C7
R534 *	D6
R535	C6
R536 *	D6
R537	C6
R538	D6
R539 *	D6
R540	C6
R541	C5
R542	D6
R543	C5
R544	C6
R545	C7
R546	C7
R547 *	C7
R549	C4
R550	A2
R551	C3
R552	F4
R553	C3
R554	A2
R555 *	G4
R556	A2
R558	H1
R559	G1
R560	C2
R561 *	D2
R562 *	D2
R563	D2
R564	H1
R565 *	E2
R566 *	C2
R567 *	E2
R568	G1
R569 *	G2
R570 *	E3
R578 *	E4
R581 *	D1
R582 *	D1
R601	I5
R602	I5
R603	I5
R604	H10
R605	H10
R606 *	I10
R607	H10
R608	H10
R609	I8
R610	C7
R611 *	I9
R612	I3
R613	J2
R614	I9
R615	I9
R618	I9
R619	I9
R643	J6
R644	I7
R645	I7
R653	D6
R654 *	D6
R656 *	D6
R657 *	D6
R658	D6
R670	I7
R671	I7
R677	I6
R678	G6
R688 *	I6
R690	D2
R691	C3
R801	B10
R802	A8
R803	A7
R804	A7
R805	A8
R806	A8
R807	A7
R808	A7
R809	A7
R821	A5
R822	B6
R823	B6
R824	B6
R825	B7
R826	A2
R827	A4

* SOLDER SID - COT CUIVRE - C SEITE - LATO SALDATURE - LADO DEL COBRE

R828	A3
R829	B4
R830 *	B3
R831 *	G1
R832	B5
RJ001 *	J10
RJ002 *	J8
RJ003 *	I10
RJ201 *	F10
RJ202 *	F10
RJ203 *	E10
RJ241 *	E8
RJ242 *	E8
RJ281 *	I9
RJ341 *	E5
RJ398 *	E10
RJ399 *	E4
RJ503 *	D4
RJ544 *	I5
RJ545 *	G3
RJ582 *	D5
RJ585 *	A2
RJ586 *	A1
RJ587 *	C2
RJ589 *	C2
RJ590 *	C2
RJ593 *	F4
RJ596 *	A2
RJ597 *	E2
RJ598 *	D2
RJ599 *	D2
RJ604 *	G10
RJ605 *	G10
RJ606 *	H10
RJ641 *	G9
RJ643 *	H5
RJ644 *	H10
RJ645 *	H10
RJ899 *	B7

SW02	B1
SW02A	I10
SW501	C8
SW502	C1
SW503	C1
SW504	H1
SW505	H1
SW510	H1

X051	J5
X301	E9
X501	E4
X502	E4

Q001	H2
Q002	H2
Q201	F9
Q203	E10
Q204	F10
Q205	F10
Q206	F10
Q207	C9
Q208	C8
Q301	E9
Q305 *	F5
Q330 *	E5
Q331 *	F5
Q501	F4
Q502	A3
Q503	A2
Q504	A2
Q505	A2
Q506	A2
Q601	I4
Q602	I4
Q603	I4
Q607 *	D6
Q644	I7
Q670	I7
Q671	I6
Q801	A7
Q802	A7
Q821	B4
Q822	A3
Q825	B3
Q826	B3

* SOLDER SID - COTÉ CUIVRE - CÔSEITE - LATO SALDATURE - LADO DEL COBRE